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**LOWER LIVING COSTS
IN CITIES**

The
National Municipal League Series

EDITED BY
CLINTON ROGERS WOODRUFF
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Lower Living Costs in Cities

By **CLYDE LYNDON KING**

The City Manager

By **HARRY AUBREY TOULMIN, JR.**

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NATIONAL MUNICIPAL LEAGUE SERIES

LOWER LIVING COSTS IN CITIES

A CONSTRUCTIVE PROGRAMME
FOR URBAN EFFICIENCY

BY

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INTRODUCTION

Few realize until they come to study the matter how closely the whole country is bound up with the welfare of the city. This volume brings home to the student of municipal affairs how closely the whole country is bound up with the welfare of the cities, and, *per contra*, how the welfare of the cities is dependent upon the whole country. There are many who think that a city can live unto itself alone, and that only those who live within the urban territory are concerned in its welfare. Professor King in these pages brings out clearly and even vividly how great is the interdependence of the city and the country.

Dr. King is qualified to speak with authority on this most important subject, for he has given the subject close attention and study not only in connection with the preparation of this book and his chairmanship of the National Municipal League's committee on the relation of the city to its food supply, but in connection with his special studies made for the city of Philadelphia, and particularly the question of trolley transportation from surrounding territories and municipal markets. He has done his work with great care and thoroughness. His statistics and data come from source material, mainly governmental publications. Where secondary sources are referred to this fact is noted in the text or in footnotes.

The manuscript of this volume went to the printer in September, 1914, and is therefore based on the facts and conditions of comparatively normal times and not upon the abnormal facts and condition of war time. This gives

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to the book a greater permanent value than if it had been the product of the war period.

The book assumes that society will continue to proceed as it ever has proceeded, by the experimental route. Consequently it contains no revolutionary theories or programs. While it offers a constructive program for urban efficiency, the limits in that program are those that have been sufficiently tested in practice and have proved their worth and adaptability. It is a study of the forces now actively at work to make the American cities efficient democracies and to give to residents of American cities ample opportunities for maximum returns in pleasure, health, recreation, and wages at minimum expenditures.

CLINTON ROGERS WOODRUFF.

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Lower Living Costs in Cities

PART I

INTRODUCTION

CHAPTER I

THE TWENTIETH CENTURY CITY

The nineteenth century village contained but few stores and the primary function of these was to supply to the farmer what he could neither manufacture nor produce for himself. The storekeeper was himself a farmer or an owner of farm lands. Every village dweller clearly recognized his dependence for prosperity upon the agricultural region round about. Each urban dweller had the same point of view and the same philosophy as to the place and function of government as did the farmer. The nation was essentially a nation of farmers.

As the village grew to be a town and the town grew to be a city, there came a significant change in its population and activities. Instead of being merely a supply station for the farming population, it became a manufacturing and industrial center. Now its prosperity depended not solely upon the development of agriculture

but rather upon the up-building of industries and factories. The prosperity of the nineteenth century village was based upon the exploitation of virgin agricultural resources; the prosperity of the twentieth century city is based upon the exploitation of men, women and children. The basis of the prosperity of the nineteenth century village was the farmer; the basis of the prosperity of the twentieth century city is the wage-earner and the man of small income.

While the cities were undergoing this significant revolution in their industrial life, there was little accompanying change in the urban dweller's philosophy and point of view. The twentieth century American city is urban only in its raw industrialism. In community spirit and in community methods, it is still only an overgrown farmers' village. Governed with a country point of view, little real effort has been made to transform it into a self-sufficient, organic community.

The basic element in this country point of view is the assumption that it is possible for the city resident to care for himself without coöperative action and community assistance, to the same extent that a farmer can care for himself; it assumes that food supply and living costs are to be solved by the urban dweller in the same way that they have been solved by the country dweller. The result has been accumulated living costs and lowered individual efficiency. Practically no community foresight or coöperative social action has intervened to lower urban living costs and but little to ameliorate urban living conditions.

Nothing more clearly reveals the continuance of this country point of view than does the attitude toward taxes and municipal enterprises. Taxes are still looked upon, all too largely, as tribute to a relatively useless institution, of about as little direct value as was govern-

ment to the average nineteenth century farmer. Under the nineteenth century political philosophy, governmental enterprises were to be kept at a minimum that taxes might be kept down. But in the twentieth century city the health, the prosperity and the well-being of the individual are to be measured by the number of things done collectively. The twentieth century urban dweller can have a clean house only by having an efficient street-cleaning department; his best health insurance is a competent health department; the "cellar" in his apartment is a small refrigerator, and hence he must look to community control for food storage; he can no longer rely upon the honesty of a farmer friend to insure the wholesomeness of his food supply, and hence he must look to the state for adequate enforcement of proper food laws. For his rates on light and heat and transit, for his recreation, for his food and lower living costs, the twentieth century urban dweller must look to co-operative action through governmental agencies. His prosperity and his living costs, that is, are largely measured by his tax rate and the number and character of municipal enterprises.

The urban problem is distinctly the great American problem of the day. According to the census of 1910, of the 92,000,000 people in the United States, one out of every ten (9.2 per cent. to be exact) lives in the three cities of New York, Chicago and Philadelphia; one in every four lives in or within ten miles of cities having a population of 200,000 or over; one in every three lives in some large urban district; and one in every two (55.1 per cent.) lives in incorporated villages, towns and cities. We are clearly a nation of city dwellers.

Nor is the city problem confined solely to any limited section of the country. To be sure about two-thirds of

our urban population, or one-half (47.9 per cent.) the population of the entire country, live in the fourteen states comprised within the New England, Middle Atlantic and East North Central divisions. Yet the significant characteristic of population movements from 1900 to 1910 is the rapid growth of cities in all the other sections of the United States. In no state in the Union did the urban population increase less than 10 per cent., while in nineteen it increased over 50 per cent. Of these nineteen states, not one is in the geographical divisions above noted; more significant still, all of them are in the Southern, Middle and Pacific states, heretofore thought to be primarily agricultural or mining sections. The city problem is, therefore, the leading twentieth century problem in all sections of the country.

Quite in contrast with this rapid growth in urban population is the slow growth or even decline in rural population. In six states, in the last decade, the rural population showed an actual decrease and in twenty-two it increased less than 10 per cent. In twenty-seven states the increase was only from 10 to 30 per cent.; in five from 30 to 50 per cent.; while in but eight, as contrasted with nineteen cities, was there an increase of 50 per cent. or over. In all but two states the urban population increased more rapidly than did the rural. Where we are adding one to our rural population, we are adding three to our city population.

This increasing ratio of consumers to producers is the first big factor in urban living costs.

This large increment to urban populations is interspersed here and there throughout the city as chance and custom dictate. As new problems arise they are met by the city's officials with an eye to solving those problems for their administration. As conditions arise that threaten the welfare or health of others ameliorative

measures are taken. Rare indeed is the city department that plans constructively for the future; and fewer still are the American cities that have even a makeshift of a plan for future development. In other words, we apply, through traditions and habit, the negative conceptions of government characteristic of the nineteenth century. The constructive, far-sighted, social point of view finds only an occasional expression and that a feeble one. The result is a city clapped hodge-podge together with the inevitable consequence of heavier living expenses for its every resident.

This want of social foresight, as reflected in high food costs, poor housing conditions, costly recreation centers, insanitary conditions, etc., is the second great factor in urban living costs.

As the prosperity and wholesomeness of the twentieth century city depend primarily upon the economic independence and the civic outlook of the wage-earner and the other workers in the city's industries, the question as to the annual income of those workers becomes of fundamental importance. In the nineteenth century all members of the family over eight or ten years of age were producers; the twentieth century family is essentially a consuming family. What of the income and earning power of the head of this family?

Something over 60 per cent. of the males sixteen years of age and over employed in manufacturing, mining, trade, transportation and a few other occupations associated with industrial life, earn less than \$626 per annum. Only 30 per cent. receive from \$626 to \$1,044, and not over 10 per cent. receive incomes of at least \$1,000. Fully one half of the adult urban workers, that is, are rewarded at less than \$626 per year.

This low average wage is the third big factor in the living costs of the twentieth century city.

We have sought to secure urban prosperity primarily by safeguarding the interests of the capitalist. The urban prosperity of the future will be dependent upon paying equal heed to the needs, conveniences and living costs of the urban worker. The twentieth century city will be both democratic and efficient when a city philosophy supplants a country philosophy; when the city is planned for economic and social efficiency; when foresight supplants chance; when collective action aids individual effort; and when governmental activity is conducted in the interests of the city's workers. And the hopeful fact of the twentieth century is that in every American city countless forces are functioning joyfully toward transmuting these ideals into actualities.

CHAPTER II

LOWER LIVING COSTS IN CITIES

Professor Chapin found that a family with an income of from \$900 to \$1,000 per year spends at least 45 per cent. of its income for food. It is, therefore, safe to say that half the workers upon whom the twentieth century city depends for its prosperity spend half their income for food. Yet food costs are increasing, and subsistence pressure is ever becoming greater. The retail prices for the following fifteen main food articles, representing approximately two-thirds of the expenditure for food for the average workingman's family, on August 15, 1912, showed an increase, as compared with the average price for the ten-year period from 1890 to 1899, of 57 per cent. Sugar had increased 6.1 per cent.; creamery butter, 34 per cent.; milk, 35.2 per cent.; flour, 35.4 per cent.; potatoes, 46 per cent.; eggs, 47.8 per cent.; lard, 57.1 per cent.; hens, 58.3 per cent.; sirloin steak, 62.7 per cent.; ham, smoked, 63.4 per cent.; rib roast, 63.6 per cent.; corn meal, 64.4 per cent.; round steak, 86.9 per cent.; smoked bacon, 100.3 per cent.; and pork chops, 105.4 per cent.

The American city still thinks corner-grocery-wise of its food supply. There has not even been adequate community action toward lowering costs to the middleman and to the retailer to the end that ultimately there may be lower costs to the consumer. In food supplies, as in government, we are applying a country point of view to a twentieth century city.

A case in point is the contrast between German cities and American cities in the extent to which the former have, through community action, assured minimum living costs and secured community facilities for their citizens. Quite in contrast to this, American cities have left transportation and terminal facilities to private control and initiative. In other words, the facilities for freight distribution and for the care and cost of transporting the American city's food supply await solely the impetus of dividends and the stimulus of the dollar sign. As are profits and the prospects of profits, so are transportation, terminal and market facilities. For instance, with rare exceptions, our water-front cities have made no effort to develop their water frontage. Though tens of millions of dollars have been spent by the national government in the building of breakwaters, canal ways and locks, this expenditure, through the want of proper urban control and activities, has enriched primarily the riparian owners, and has done all too little toward solving the problem of economic distribution. Again to make a contrast with cities of other countries, the German cities treat the means of transportation by water and rail as factors of the greatest importance. Docks and harbors are owned by the cities and are so constructed as to coördinate freight distribution through city-owned railways, through state-owned canals and railroads, and through state-improved water routes and highways. The point is not that public ownership *per se* is better or worse than private ownership, but that public initiative must be coequal with public needs.

Nor are food costs the only costs that are rapidly increasing to the city's earners. The rapid rise in real estate values, more specifically depicted in a later chapter, has meant either higher rents for the same accommodations, or the securing of fewer conveniences and neces-

sities for the same expenditure. The very nature of urban employment necessitates a greater expenditure for health maintenance and lower earning power through debility. Growth in urban populations in and of itself means the crowding-out of open spaces and increases the sum necessary to wholesome recreation, a recreation that is all too artificial and unsatisfactory at its best. Earning and physical efficiency necessitate an extension of time in school, thus both adding to family costs and delaying the day of self-support. With city growth come necessarily increased expenditures for those services furnished by public utilities; and these increased expenditures offer temptation to inflate capital, which still further multiplies the expenses that must be borne by the urban dweller.

Growing city populations offer the opportunity as well as the need for so shaping urban facilities and conditions that city life may run its day happily with a minimum of useless costs and a maximum of returns for necessary expenditures. For lower living costs is but another phrase for individual and community efficiency. In the following chapters, therefore, consideration is given to waste through the want of coöperation and to needless costs due to civic carelessness in planning for the future. Through individual and social negligence, building, health, educational, recreational and other urban costs multiply; through individual and social vigilance these costs relatively decrease.

Living costs may be lowered in effect either through increasing the actual money wage or increasing the purchasing power of existing wages. To both these considerations, therefore, later pages of this book are devoted.

The wage received must, after all, be measured by the power to purchase. Through readjustments in current

wealth distribution, whether by labor unions or general acceptance of the need for a higher wage, or by other means, the earner's money wage may be increased, but the upward limit is reached when a wage becomes the full measure of what the earner produces. The continued increase of wages must, in the last analysis, await an increased earning power. To a greater productive power, whether as a worker on the farm or in the city, or whether through health conservation, wholesome recreational facilities, educational efficiency or other means, the later pages of this book are therefore devoted.

The increase of the actual purchasing power of a given wage is just as important, nay more so, than an increase in the money wage. The very contiguity of city life means that the many can get results for all at far lower costs than can individuals working singly. In sparsely settled regions, garbage removal, transportation, water supply, buildings, etc., may be secured through isolated individual effort, at a lower cost than by coöperative effort. But not so in densely populated areas. Here water supply, inspection of food supply, housing operations and nearly all of the other living essentials to urban life, can be secured most cheaply through coöperative effort, expressed in governmental action and the tax rate. Minimum living expenses in cities are secured, in many essentials, only through community action.

It is no easy task for the twentieth century urban dweller to get community action in his own behalf. But few of the classes and agencies through which he has to work to secure civic action for the advancement of his own interests are within his immediate social, industrial or governmental control. He lives in a tenement or apartment house, the owner of which lives far out in the suburbs, too aloof from social or community pressure to afford reasonable rents and reasonable accommoda-

tions. He secures his heat from a central heating station over which his city government has not as yet extended its control. For his light, his telephone, and similar public utilities, he pays some absentee capitalist goodly dividends on stocks that may represent little more than the city's future needs capitalized. Not only must the urban dweller await the action of absentee real estate speculators and absentee owners of the city's utilities, to secure reasonable living and transit expenses, but even for lower food distribution costs he must await the pleasure and profit of absentee owners of wharves, docks, terminals and water and railroad facilities. And when he turns to the abatement of unnecessary costs or to the improvement of services, he finds that he must act through an absentee legislator; for the greater part of the city's powers are determined not by the city legislative body, but by the state legislature, over which the urban dweller has but scant influence.

The very difficulty of securing, as well as the values accruing from, community action therefore necessitates that its economies and values be set out all the more fully in the succeeding pages.

Reducing living costs in cities becomes essentially a constructive program for individual and urban efficiency.

PART II

URBAN FOOD COSTS

CHAPTER III

FOOD FOR THE CITIES

The whole world is now the city's truck patch. Food for the twentieth century city comes from every section of the globe by every known type of transportation agency. Under the stimulation of goodly profits, no land has been so distant, no expense so great, no product so rare that it has not been at the command of the city dweller who can pay the price.

None are the cities and few indeed are the villages in the United States where Florida's oranges, Oregon's apples, Boston's codfish and California's prunes are not on sale. Every urban community now has fresh strawberries from the spring time of the South in January and February to the fall time of the North in August and early September. As spring advances from south to north, the yield of each season is placed at the call of every urban citizen.

In days not half a century gone if the crops in "the valley" failed, there was hunger in the village. To-day the valley's crop for all the year—yea, for a succession of years—may be wiped out and prices be not materially changed in the urban centers near-by. Indeed, if all the crops of the state of New York should "fail," the dwell-

ers in New York City would probably not notice significant changes in food prices save, perchance, on fresh milk.

A city in a desert, if it have its own means of creating wealth, may now be apparently as independent and prosperous as the city in the wealthiest of agricultural communities.

The first big fact about the food for the twentieth century city is the diversity of its supply.

This making of the world the city's garden patch and of the sea the city's harbor has had certain profound effects upon the urban dweller's food supply and costs and upon his attitudes thereto.

First of all, this world-wide diversity in food sources means stability in supply and hence stability in prices. The selling price of wheat in Chicago or Duluth is as much dependent upon crop conditions in Argentina or in India or in Russia as in the Great Northwest itself. The United States raised in 1912 the tremendous total of 730,267,000 bushels of wheat, but this was but one bushel out of twenty (19.4 per cent.) of the world's wheat supply for that year (3,758,652,000 bushels). Potatoes from Maine compete in price (after the tariff is taken into account) with those grown in Ireland. And when the orchards of Oregon and Colorado are not competing with those of Michigan or New York, apples of the northland are competing with the citrus fruits of the southland. The people of St. Louis for the same breakfast eat eggs from Texas, Kansas, Michigan and China. And even in Kalamazoo, California celery keeps down the price of celery locally grown. At the great primary markets of the world these world-wide crop conditions and daily hunger wants are hourly transmuted into food prices for the city dweller.

This diversity in the city's food supply means that a

city can now be located wherever specialization warrants without suffering from untoward prices or the countless dangers formerly inherent in distance from the base of supply. This diversity means, too, not only specialization in cities, but specialization in farming countries as well. The raising of turkeys can thus become a leading business of Tennessee or Texas, while the farmer near Boston can specialize on asparagus, the Kansan on corn, the Coloradoan on beet sugar. And, finally, diversity in food supply means choice of foods and consequently a more satisfying, even though more costly, daily urban life.

But this diversity in food supply has its disadvantages as well as its advantages, disadvantages which cities can minimize though they have thus far usually neglected to do so. First and foremost of these is the tendency of urban dwellers to underestimate the dependence of the city upon the prosperity and productivity of the country round about. When the citizens of New York City eat Kansas cornmeal and Minnesota wheat, agricultural values to that extent move out of New York State into Kansas and Minnesota. When Philadelphians buy produce grown in Florida and Tennessee, Pennsylvania land values to that extent migrate from Pennsylvania to those states. It is a significant commentary on the present relations between the city and its surrounding country that land values are, on the average, higher in the non-urban than in the urban states. This is a good thing for the non-urban state, to be sure, but what the city manufacturer and storekeeper too often forget is that, when land values go elsewhere, purchasers and purchasing power go elsewhere, too. No city is so wealthy, nor the purchasing power of the rank and file of its citizens so ample, that it can afford to be heedless of the prosperity of its near-by communities; nor heedless of the

higher food costs incident to higher distribution and transportation costs for food grown at a distance.

The second great disadvantage that the urban dweller is heir to, because his city has been so content with diversified and ample, though distant, food supplies, is the greater food costs necessarily resulting from these heavier transportation and distribution costs. The simple fact is that, other things being equal, the greater the distance the city is from its base of supplies, the greater will its food costs be; and this not because transportation charges are higher, for that does not follow of necessity, but because the system by which distant food supplies are handled must necessarily be more complex and must require more men—who must be paid—and more risks—which must be compensated—than the near-by supply. Food from distant sources must of necessity run the full gamut of middlemen and distribution costs, later described in detail, while selling at home can be by a less circuitous route and by methods less expensive. In their enthusiasm for national and world markets, American cities have built up a marketing system the costs of which are based on selling in distant rather than near-by markets. American cities have, as a rule, overlooked the wealth that lay at their feet—a wealth that multiplies with use, for the greater the amount of selling at home, the greater the adaptation of the farmer's output to the city's needs.

Assuring minimum food costs in cities is therefore the twofold problem of: (1) securing all the advantages of world-wide markets at minimum distribution costs, and (2) of encouraging productivity on near-by lands and lowering the costs incident to the selling of the output of those lands in near-by cities.

CHAPTER IV

THE COST OF FOOD DISTRIBUTION

The average urban dweller spends practically one-half his income for food. Living costs, therefore, mean primarily food costs. These food costs are rapidly increasing. The significance of these increases to urban prosperity can be partly realized from the statement that price increases since 1890 add \$1,680,000 to what the citizens of New York now annually pay for sugar; \$21,581,933 to what they annually pay for eggs; \$6,900,000 to what they annually pay for potatoes. New York consumers now pay about \$645,000,000 annually for certain main food products. If food prices should continue to increase in the next decade at the same rate that they increased in the last decade, New York dwellers in ten years will have to pay a billion dollars for what they now get for half a million.

Can this tremendous food cost be reduced? It seems evident that land values, raw materials, and the wages of agricultural laborers must continue to increase in price, as they have since the Civil War. Production costs must therefore increase. If food costs are to be reduced, or even maintained at their present standards, there must be a lowering in distribution costs.

What are the costs of food distribution and to whom do these costs go?

Two studies have recently been made in an attempt to answer this question for Philadelphia and for New York City respectively. The first was made by the

author to Mayor Rudolph Blankenburg on Distribution Costs in Philadelphia¹; the other, by the Committee on Markets, Prices and Costs, appointed by the New York State Food Investigating Commission. The former report was made in October, the latter in August, 1912.

The results of the Philadelphia investigation are summarized in the table² on page 19. This table gives the

¹ See Report to Mayor Rudolph Blankenburg, entitled "A Study of Trolley Light Freight Service and Philadelphia Markets in their Bearing on the Cost of Farm Produce."

² The first item indicated in this table is the price received by the average farmer, who sells to some country buyer because his sales are not large enough to warrant his dealing directly with commission men. The price received by the large farmer who can sell direct to commission men would be the price received by the country buyer. The average farmer sells either to the country store man or, especially near large urban centers, to some traveling huckster, who buys to sell on the city streets, in the city markets, or to large urban jobbing, commission or retail houses. The price received by the farmers from these country buyers was secured from the price paid by country stores and from replies to scores of letters sent out to farmers in all directions from Philadelphia. This letter particularly asked the farmers to give prices on all produce that they sold during the weeks ending July 20 and July 27.

The cost of freight given as the second item is an estimate on transportation costs for distances of from twenty-five to fifty miles. This estimated freight rate is the rate by trolley, by steam rail, by water, or by wagon. In some instances the freight charge was estimated from points where the freight is greatest, while in other instances the minimum transportation charge is taken; all, however, are typical transportation costs.

The third item indicated in the table is the price received by the wholesaler and was secured from the daily reports of wholesale prices. The fourth item, consumers' prices, was based upon price reports sent in at the request of the Director of Philadelphia's Department of Public Works by the leading employees in that department. In most cases there were a half-dozen or more reports from each of the wards of the city.

prices received by the farmers for certain kinds of produce shipped into Philadelphia from the outlying counties; the prices received by each set of middlemen; and the prices paid by the consumer, with the per cent. added to food costs in each step of the distribution process.

From this table it will be seen that the excess of the price paid by the consumer over the price received by the producer ranges from 67 per cent. to 266 per cent., the average being 136 per cent. In other words, the farmer received \$1.00 for goods for which the Philadelphia consumer paid \$2.35. This is the average increase of consumers' over producers' prices, as the prices received by the farmer are those received by the average farmer who does not sell in large lots, and the prices paid by the consumer are the prices paid by the average consumer who buys in relatively small quantities. In large part, too, it is the increase in perishable goods at "the height of the season." The average distribution costs for grains and staple products are, of course, not nearly so high.

Further analysis of this table shows that the costs of food distribution go for the following purposes:

1. A professional huckster or country store man buys from the farmer and sells to the wholesaler or urban jobber. His profits are probably small. As one country buyer wrote, "When we are compelled to wholesale, we get a very small margin." As a rule, the country buyer probably makes around 10 per cent. on the price he pays

Every possible effort was made to secure reports for the same grade of goods and for the weeks ending July 20 and July 27. The farmers, the purchasers and the employees of the Department of Public Works were all asked to designate carefully the grade of goods and the exact date of the sale or purchase. The price indicated for any article in the table is, therefore, the price for a given week.

TABLE GIVING THE PRICE RECEIVED BY THE PRODUCER AND EACH MIDDLEMAN AND THE PER CENT. INCREASE OF EACH PRICE OVER THE PRECEDING PRICE, TOGETHER WITH THE TOTAL INCREASE OF CONSUMERS' PRICES OVER PRODUCERS' PRICES

	FARMER	PLUS FREIGHT TO TERMINAL		THE COUNTRY BUYER		WHOLESALE AND JOBBER		RETAILER		Per Cent. Increase of Consumers' Prices Over Producers' Prices
		Amount	Per Cent. Increase Over Preceding Price	Price Received by	Per Cent. Increase Over Preceding Price	Price Received by	Per Cent. Increase Over Preceding Price	Price Received by	Per Cent. Increase Over Preceding Price	
Butter (low grade) per lb.	\$.18½	\$.19	2	\$.21½	13	\$.24	11	\$.32-	33-58	73-105
Butter (high grade) per lb. ....	.23	.23½	2	.26	10	.29	11	.40-	38-55	74-96
Potatoes (low gd.) per bu. ¹	.53	.62	17	.68	9	.75	10	1.10-	46-73	108-145
Potatoes (high gd.) per bu. ....	.63	.72	14	.80	11	.90	12	1.30-	44-78	106-154
Eggs (low gd.) ¹ per doz. ....	.11	.12	9	.13½	12	.15	11	.25-	67-100	121-173
Eggs (high gd.) per doz. ....	.21	.22	4	.24	10	.27	11	.35	30	67
Huckleberries (low gd.) per qt. ....	.04½	.05½	22	.06	9	.07	16	.12	71	166
Huckleberries (high gd.) per qt. ....	.07	.08	14	.10	25	.11	10	.15	36	114
Blackberries (low gd.) per qt. ....	.04	.05	25	.05½	10	.06	13	.12	100	200
Blackberries (high gd.) per qt. ....	.06	.07	16	.08	14	.09	12	.15	66	150
Live Poultry (low gd.) per lb. ....	.06	.06½	7	.09	38	.11	22	.22	100	266
Corn per doz. ....	.15	....	....	....	....	....	....	.40	....	167
Tomatoes per pk. ² ....	.32	.32½	1	.36	10	.40	11	.80	100	150

¹ In many cases these eggs are candled and 60 per cent. of them sold as freshly gathered eggs—the others being sold as "rots and spots," etc. In other cases, however, they are sold to the consumer as eggs fresh from the farm. Thus one man writes that they sell them as such and asks: "What is the effect of the egg law on us?"

² This is the total price when sold in the quantities the average purchaser buys; that is, a basket of potatoes and a quarter or half-peck of tomatoes.

the farmer, plus freight to terminal. Handling through the country buyer increases the total cost of the goods from 9 per cent. to 25 per cent. The country store man, to be sure, probably makes on such staple articles as eggs an even smaller percentage in order to hold the trade and custom of the farmer.

2. From 1 to 20 per cent. of what the farmer receives goes for freight to the terminal. Of course this percentage varies with the perishability and quantity of the goods and the route of shipment.

3. Then the wholesaler and jobber add their charges. The above table shows an increase through handling by these middlemen of 11 per cent. over the country buyer's price. The New York Market Commission concludes that "the total cost of wholesaling including profits is about 10 per cent." The rates of commission for selling freight and vegetables range from 5 to 10 per cent. of the gross proceeds of the sales. For selling grain and livestock the basis is quantity rather than the gross proceeds.

4. Then for handling the goods and selling them to the consumer the retailer charges from 30 to 100 per cent. increase over the wholesaler's price. The above table shows an average increase due to the retailer of 45 per cent.

It is not meant, of course, that all farmers' produce goes through just these channels. For instance, in all large cities, there will be a jobber between the wholesaler and the retailer. But it is very clear that it is this method of food distribution that fixes the price paid by the consumer. It is this roundabout route that the majority of country produce still takes, and hence determines food distribution costs.

That this table is typical is amply supported by evidence from all quarters. A table in the above-men-

tioned study by the New York State Food Investigating Commission shows how much is added to the cost of food from the time it lands at the terminal in New York City until it arrives in the consumer's kitchen. This table reveals an increase from the terminal to the consumer of 17 per cent. per pound for creamery butter and 30 per cent. for eggs. Meat prices increased 41 per cent. Fish prices increased from 25 per cent. for blue fish to 85 per cent. for halibut, 160 per cent. for haddock and 180 per cent. for cod. Canned goods increased from 34 per cent. for pork and beans to 70 per cent. for string beans, 72 per cent. for peas and 80 per cent. for a can of corn. Staple groceries increased per pound from 20 per cent. for flour to 33 per cent. for sugar and rolled oats, to 100 per cent. for rice, 112 per cent. for tea, and 114 per cent. for codfish. Fruit increases were: peaches, quart, 67 per cent.; Baldwin apples, pound, 116 per cent.; bananas, 135 per cent.; and lemons, 122 per cent. per dozen; while vegetables increased from 60 per cent. per pint box of tomatoes to 100 per cent. for cabbages, carrots and beets, to 150 per cent. for celery. There was an average increase of 63 per cent.¹

¹The products increasing 25 per cent. or less were: frozen roasters, lb., 24.15; bread, lb., 23.0; flour, lb., 20.0; salt mackerel, lb., 23.5; condensed milk, can, 22.7; creamery butter, lb., 16.9. Those increasing from 25 per cent. to 50 per cent. were: eggs, 30.0; pork and beans, can, 34.0; live fowls, lb., 25.0; blue fish, 25.0; pork, lb., 45.45; lamb, lb., 31.1; ham, lb., 45.45; bacon, lb., 33.33; sugar, lb., 33.3; dried beans, lb., 40.0; rolled oats, lb., 33.0; lard, lb., 31.8; salmon, can, 49.0; oranges, 47.0; whole milk cheese, lb., 28.13. Those increasing from 50 per cent. to 100 per cent. were: halibut, lb., 85.5; coffee, lb., 51.3; dried peas, lb., 60.0; weakfish, lb., 61.0; peas, can, 72.5; corn, can, 81.8; string beans, can, 69.6; fresh milk, qt., 71.5; potatoes, 74.0; white onions, lb., 85.0; fresh peas, qt., 91.8; lettuce, head, 93.0; green corn, ear, 66.6; cabbage, head, 90.0; peaches, qt., 66.6; beef, lb., 52.0; tomatoes, pt., 60.0; macaroni, lb., 50.0. Those increasing

A third recent study (1913) of significance in showing distribution costs and where they go is the study made by the Wisconsin Board of Public Affairs on marketing Wisconsin cheese. The milk goes from the farmer to the cheese maker. The cheese maker gets from $1\frac{1}{2}$ to 2 cents per pound for making the cheese and selling it to the local Wisconsin dealer. This dealer sells it to a packer in some large urban center, getting for his services from $\frac{3}{4}$ to $1\frac{1}{2}$ cents per pound. The railroad freights then come in to add from $\frac{1}{4}$ to $2\frac{1}{2}$ cents per pound to the cost of the cheese. The packer then sells to the wholesale grocer, who makes from $\frac{1}{4}$ to 3 cents per pound for his services. In the meantime, cold storage charges have added from $\frac{1}{8}$ of a cent per pound for storage for a month or less, to $\frac{3}{8}$ of a cent per pound for storage for from three to six months. The wholesaler sells to the retailer, who then sells the same cheese for which the farmer in summer received $9\frac{1}{2}$ cents per pound for 20 to 23 cents, and for which the farmer in winter received 11 cents per pound for 25 to 30 cents, an average increase of from 210 to 272 per cent. for distribution costs alone.

A similar route is taken by other food products. Thus Kentucky onions are bought by the local merchant who sells to a Louisville jobber, who sells to the retailer, who sells to the consumer. Arkansas apples, sold by the farmer at \$1.50 per barrel, have been known to retail in New York City for \$25 or more a barrel, while cauliflower, sold by the farmer for one cent a head, is retailed in New York City for fifteen cents a head. A

100 per cent. and over were: fresh beans, qt., 106.2; carrots, bunch, 100.0; Baldwin apples, lb., 116.2; bananas, doz., 135.0; lemons, doz., 122.0; cod, lb., 180.0; haddock, lb., 160.0; rice, lb., 100.0; tea, lb., 111.87; dried codfish, lb., 114.2; celery, bunch, 150.0.

leading commission merchant, an officer in one of the leading organizations of commission merchants, has recently (May, 1914) given to the author the following statement as to the enhancement of prices at each handling, and the various steps through which the three staple and relatively non-perishable food products, apples, potatoes and onions, go in their route from producer to consumer. The costs and the route for one barrel of New York State apples, for which the grower received \$2.50, was handled by the local dealer at a profit of twenty-five cents, who then shipped it to a wholesale receiver at a cost for transportation and refrigeration of thirty-five cents, who in turn sold it at a profit or commission of fifteen cents to a jobber, the cartage to the jobber's quarters being five cents; the jobber received a profit of twenty cents for selling it to the retailer; the retailer added twenty-five cents for cartage and delivery and \$1.25 for profit, selling the barrel to consumers at \$5.00, 100 per cent. more than the grower received. For one bushel of potatoes, for which the grower received sixty cents, the profit of the local dealer was four cents, transportation cost nine cents, the commission to the wholesale receiver four cents, cartage two and one-half cents, profit to jobber ten and one-half cents, cartage, delivery and profit to retailer thirty cents, the consumer paying \$1.20—just twice what the farmer received. The cost added by each step in the distribution costs of a one-hundred-pound sack of Ohio onions was: price received by farmer, \$1.10; profit to local dealer, ten cents; cost of sack, ten cents; transportation, twenty cents; wholesaler's commission, ten cents; cartage, five cents; jobber's profits, fifteen cents; retailer's cartage, delivery and profits, seventy cents; cost to consumer, \$2.50—an increase of 136 per cent.

The Saskatchewan Grain Commission of Canada pre-

COSTS IN MARKETING CANADIAN GRAIN.	1909	1913
THE COUNTRY ELEVATOR OWNER		
For receiving, weighing, elevating, cleaning (when possible), spouting, insuring against fire, storing for first 15 days, and loading into car.....	\$17.50	\$17.50
(For subsequent storage and insurance, if any, $\frac{3}{4}$ cent per bushel per month. No change.)		
THE RAILWAY COMPANY		
For hauling from a shipping point in Saskatchewan to Winnipeg, a distance of 641 to 1,086 miles, \$96 to \$144 per 1,000 bushels; on an average, say.....	120.00	120.00
For hauling from a Georgian Bay port or Port Colborne to Montreal.....	42.50	42.50
(This is a 5-cent rate, but it includes elevator charges at either end of the haul; for these services $\frac{3}{4}$ cent has been deducted.)		
THE DOMINION GOVERNMENT		
For sampling and inspecting at Winnipeg, 50 cents per car; weighing at Port William, 30 cents per car; cargo inspection at Port William, 50 cents per 1,000 bushels; cargo weighing out of Port William, 30 cents per 1,000 bushels.....	1.60	1.60
THE COMMISSION MERCHANT		
For selling wheat on Winnipeg Grain Exchange, 1 cent per bushel.....	10.00	10.00
THE EXPORTER		
Not possible to determine exactly; say.....	10.00	5.00
THE TERMINAL ELEVATOR OWNER		
For receiving, elevating, cleaning, spouting, insurance against fire, and storage for the first 15 days.....	7.50	7.50
THE BANK		
Interest and exchange on money supplied to meet draft of shipper or commission merchant; interest on, say, \$700 for one month.....	3.50	3.80
Exchange on, say, \$700.....	.90	1.75
Interest on money supplied to exporter to finance the exporting of the wheat on \$1,000, for, say, two months.....	10.00	10.85
THE LAKE STEAMSHIP COMPANY		
For carrying wheat from Port William or Port Arthur to Georgian Bay ports or Port Colborne (October or November charter).....	10.00	20.00
THE TRANSFER ELEVATOR COMPANY		
For elevation from vessel to cars at Georgian Bay or Lake Erie port and 15 or 30 days' free storage of export grain.....	2.50	2.50
For transfer from railway car to ocean vessel at Montreal and 20 days' free storage.....	9.00	9.00
THE OCEAN STEAMSHIP COMPANY		
For carrying wheat from Montreal to Liverpool, London, or Glasgow docks.....	40.00	75.00
(On the basis of November, 1912; freight rates, May, June, July and August rates were higher in 1913.)		
MARINE INSURANCE		
Insurance while on Great Lakes; average figure for first- and second-class boats for September-November shipments of lower lake ports, 70 per cent. on \$80.....	5.60	5.60
Insurance while on Atlantic (first half of November rate from Montreal), 40 per cent. on \$1,000.....	4.00	4.00
SUNDRY CHARGES		
Insurance against fire while in eastern transfer elevators, transfer of money from Europe to Canada, fees connected with sundry documents, certificates, etc., say.....	10.00	10.00
Total.....	\$304.60	\$346.60

sents a table on page 24 of costs for marketing a car-load of grain from the country elevator in Saskatchewan to European markets. This table is of interest not only because it shows the costs added at each step, but also because it gives a clear idea of the route exported food-stuffs follow, and the points where cost were increased in 1913 over those of 1909.¹

The value of the egg crop of the United States during the year 1910 was about \$485,000,000 at wholesale prices. Consumers, according to the United States Department of Agriculture, in that year paid from 50 to 100 per cent. more. This means that, as a nation, we paid from \$254,000,000 to \$485,000,000 during that one year just to have our eggs alone taken from the wholesaler to the consumer. As the farmers received the wholesale price less the commission, freight, cartage, insurance, cold storage, and similar costs, the distribution costs were nearer the latter than the former sum. For six billion dollars' worth of products sold by farmers, consumers pay around thirteen billion dollars.

It is difficult for the imagination to grasp the social and economic significance of these tremendously high costs for food distribution. Assuming that New York consumers pay annually \$645,000,000 for their food, certainly no less than \$150,000,000 of this goes in getting that food from the terminal to the consumer's kitchen. Of the \$146,000,000 paid annually by the people of New York City for eggs, milk, onions, and potatoes, less than \$50,000,000 was received by the men who raised the crops; \$96,000,000 went for distribution costs.

At a cost of fourteen cents per meal per person for all classes in Philadelphia, high and low, rich and poor, Philadelphia citizens are spending annually \$225,000,000

¹ Daily Consular and Trade Reports, February 16, 1913.

for food. Certainly over \$75,000,000 of this goes into cartage, delivery costs and retailers' profits.

Of the total expenditure made by the American nation for food, from two to three fifths goes in getting that food from producer to consumer, and in deterioration and decay due to inadequate facilities and improper methods of marketing.

The following chapters in this section are devoted to the problem as to whether, and how, this huge cost for food distribution can be lowered. The problem can be resolved into three questions:

1. Can a more stable and reliable wholesale price be secured? To this question Chapters IV and V are devoted.
2. Can retail prices be reduced and can certain abuses by retailers be eliminated? Chapter VI discusses this problem.
3. Can distribution costs be lowered? To this question are devoted the remaining chapters of this section.

CHAPTER V

FORCES FIXING WHOLESALE PRICES

Of greater value than bargain counter prices or seasonal variation in prices are a nation-wide stability in price and a nation-wide fluidity in the movement of food products. A sure and steady market, even at a lower wholesale price, will, more than any other one factor, stimulate production and tend to give a steady and lower retail price to consumers.

The wholesale price of foodstuffs is fixed by forces over which neither the farmers nor the middlemen of any community or even of any state have any appreciable control. Any study of food distribution must, therefore, begin with a survey of the forces, national and international, that make for fluidity and acceleration in wholesale prices. What these national and international forces are, what their economic effects, and how they can be made more potent and wholesome factors in shaping consumers' prices; the means by which wholesale prices are determined; the elimination of any abuses, actual or possible, in the fixing of such prices; and a study of the means by which maximum returns can be given to producers while giving steadier and lower prices to consumers—all are, therefore, matters of first importance.

The forces by which wholesale prices are determined and are kept practically uniform throughout the United States and the commercial world are fourfold: first, the comparatively low cost of interstate and oceanic transportation; second, the use of cold storage; third,

the methods used in arriving at market quotations; and, fourth, the practice known as diversion of shipments or selling in transit.

Steam freight transportation of foodstuffs is essentially in carload lots. The place that freight transportation plays in the mobility of distributing foodstuffs and in getting food products from all states and all parts of the world to places where there is the greatest local need and demand for them is revealed by the fact that the receipts from freight transportation in the United States in the year 1913 totaled \$2,198,930,565. This grand total is due not to the fact that the rate of transportation on any given product is relatively high, but to the vast amount of freight transported. A bushel of wheat may be sent from Chicago to New York by lake and canal for a little over five cents, and by all rail for but a fraction over nine cents. Grain on the average is carried from 220 to 225 miles. The rate for this haul averages four cents per bushel. The cost of carrying from Kansas City to New York, a distance of one thousand miles, enough wheat to make a barrel of flour, is not over sixty-five cents. The mean cost of getting grain, flour and provisions from Chicago by all rail to seaboard and thence by steamer to Liverpool does not exceed nineteen cents per one hundred pounds.

This splendid development of interstate and trans-continental freight has had most significant economic results. It has made it possible for New York City to get its food on an average of one thousand miles inland on a four-day haul by fast freight. Food supplies of the large urban centers of the Middle Atlantic and New England states can now come from the valleys of the Ohio, Missouri and Mississippi. The Middle West now produces two-thirds of our food supply, while the East produces but 7 per cent. of it. It has made it possible

for certain of the Southern states, such as Georgia, Alabama, Mississippi and Texas, to give over their land (65.8 per cent. of it) to cotton raising rather than growing food products, while, at the same time, it is also possible, in recent years, for the Central and Northern states to get their early supply of fruits and vegetable products from the far South.

There can thus be an adaptation of products to production costs. The corn used in the New England cities can be produced in the Middle West at an average cost of \$6.82 per acre instead of at home at \$16.82 per acre.

ERRATA

Page 29, 2nd paragraph, 5th line,
reads 75 cents per bushel—
should read 75 cents per ton.

early history, to develop any local manufactures. Examples of similar kinds of freight abuses can be multiplied. Each locality and each state would still gain much by scrutinizing its freight rates and freight service for its citizens, for transportation rates and service unquestionably have a very great influence upon the industries and output of any given community. And yet in the face of all the abuses that have existed and may still exist, American railroads have perfected a freight service that has revolutionized the transportation of food products. This freight service, more than any other one factor, has made for equality of prices between the

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It is not meant from the above that all commodity rates are just and equitable, or that freight rate abuses do not still exist. Rate experts have held, for instance, that Philadelphia citizens paid in 1912, because of unfavorable rate discrimination, 75 cents per bushel more for their coal than was paid by the citizens of other cities for the same coal carried over the same tracks at exactly the same expense. This would mean a total extra cost to Philadelphia consumers of \$4,000,000 annually. As has been shown by Professor John B. Phillips, of the University of Colorado, the railroads through freight discrimination made it impossible for Denver, during its early history, to develop any local manufactures. Examples of similar kinds of freight abuses can be multiplied. Each locality and each state would still gain much by scrutinizing its freight rates and freight service for its citizens, for transportation rates and service unquestionably have a very great influence upon the industries and output of any given community. And yet in the face of all the abuses that have existed and may still exist, American railroads have perfected a freight service that has revolutionized the transportation of food products. This freight service, more than any other one factor, has made for equality of prices between the

different geographical divisions of the United States, has made for stability in prices for all sections, and for a nation-wide price both for producers and consumers on all farm products.

Of like effect on stability and acceleration in wholesale prices is the relatively low rate of water transportation, and the rapid, though still backward, development of water freight service. The relative cost of shipping freight by all water has been succinctly stated by Mr. S. A. Thompson as follows:

"Suppose you had a ton of freight to ship and a dollar to spend in shipping it. How far will the dollar carry the ton? By horse and wagon, a little over 4 miles; by English steam truck, 20 miles; by rail at the average rate for United States railways, 133 miles; at the rate of a group of selected railways, 200 miles; in the Erie Canal, 333 miles; on the European canals, 500 miles; by lake at the average rate through the 'Soo Canal' in 1911, 1,500 miles; while at the rate at which coal is carried both on the Great Lakes and on the Ohio and Mississippi rivers, the ton of freight can be shipped 30 miles for a cent, 300 miles for a dime, 3,000 miles for a dollar."

Inter-oceanic freight rates are cheaper still.¹ This low ocean freight rate and the character of ocean freight service make accessible to producer and consumer the markets and food supplies of the entire world. Our coastwise trade especially has had significant results in getting food supplies in great quantities from the southern to the northern states, and the heavier outputs of the

¹One hundred pounds of pork can be taken from New York City to Liverpool for about \$.21 (Annual Statistical Report of the New York Produce Exchange, 1912, p. 129), and one hundred pounds of bacon can go from New York to Hamburg for from \$.26 to \$.32.

northern cities to the southern ports. This coastwise trade should be particularly stimulated by the completion of the Panama Canal. The fish and fruit of the Pacific Coast will then be made available to the cities of the Atlantic Coast and the output of the Atlantic cities to the purchasers on the Pacific Coast. Halibut, salmon and other products could unquestionably be brought to Boston and New York at cheaper rates by the isthmus than by land haul in refrigerated cars.

While the world's population has during the last fifteen years increased at the rate of but 1 per cent. per annum, the volume of the world's commerce has during that same period increased at the rate of 4.5 per cent. per annum. This increase in the world's trade would, of course, have been impossible without the development of oceanic freight service. A similar result on the volume of trade within the United States has been caused in large part through the development of railway freight service and inland water transportation. The volume of trade in the United States has since 1896 increased on an average of 5.3 per cent. per annum in the face of an increase in population of but 1.5 per cent. Further development will unquestionably be stimulated by greater freedom in water competition.

As potent as this national and international development of transportation by rail and by water has been, certain factors have inhibited their maximum development and have thus minimized their effectiveness in getting nation-wide and world-wide price stability and fluidity in food distribution. The chief of these factors are: first, the relatively high cost of delivery to shipping points; second, the throttling of water competition by water and rail companies or by city, state and national negligence in securing adequate wharfage and terminal facilities; and third, the tariff.

One dollar in every twenty of the total value of the twelve main products of the United States goes in haulage from farm to shipping point. For this purpose we expend \$73,000,000 annually. For all produce, certainly over \$85,000,000 annually is spent merely to get farm produce to the shipping point. On the average it costs one-tenth of the entire wholesale value of our corn crops to haul that corn to the shipping point. To put these facts another way, it costs as much to haul a ton of the average farm product one mile as to send it by steam rail from 300 to 500 or even 1,000 miles. The cost to the Pennsylvania farmer of hauling his produce to the shipping point often amounts to more than the total rail transportation costs of the Kansas or Colorado farmer who sells in the same market. Again, the average cost of hauling produce from farms to shipping points in the United States, as a whole, ranges from seven to forty-four cents, with an average of eleven cents, per one hundred pounds. The mean rate on grain, flour and provisions through from Chicago to Liverpool by all rail to seaboard and thence by steamer is nineteen cents per one hundred pounds, and, if brought by lake and canal to the seaboard and thence by steamer to Liverpool, the rate is not far from fifteen cents per one hundred pounds. That is, it costs but four cents per cwt. more to get farm products from Chicago to Liverpool than it does to get them from the farm to the shipping point. In other words, in fixing nation-wide market quotations on farm produce, the disadvantage of the western farmer, because of his distance from the market, is slight indeed so far as cost of transportation from shipping point to market is concerned.

These tremendous costs, due primarily to poor roads, mean to the country as a whole a far heavier loss than merely the sum total of all haulage costs. They mean

that the local output of many communities can have no effect on national prices, for the very adequate reason that the first cost of marketing is too great. These exorbitant initial costs, that is, minimize the effects of a splendid freight service in securing stable prices to producers and to consumers. Too often, it must be said, especially for certain crops and at certain times of the year, the railroads themselves inexcusably add to these initial costs by not providing adequate and proper service for less than carload lots, by not providing a sufficient number of cars, and by not giving to the cities adequate terminal facilities for rapid and economic freight distribution. These defects lead to spoilage, to delays, to heavy losses in farmers' time, to deterioration in consumers' goods. In November of 1912 the shortage of over 50,000 cars led to just such inconveniences, heavy costs and consequent loss in fluidity of prices and food supply, and in higher prices to consumers.

It is a matter of common knowledge that the usefulness of our internal waterways has been materially diminished through control by land competitors, through "conference" agreements between water competitors, and because of inadequate wharfage and terminal facilities, due all too frequently to the untoward influence in our legislative halls of the big steam competitors and their allied interests. Out of fifty of our foremost ports, only two, New Orleans and San Francisco, have practically complete public ownership and control of their active water frontage; eight have a small degree of control, and forty none at all. Out of thirty-seven ports for which data are available (excluding New Orleans and San Francisco) only fourteen have any publicly owned wharves (about 260 such wharves in all, many privately controlled under long leases). The need of better wharf-

age facilities is further discussed in the chapter on A City Program for Lower Food Costs.

We have spent millions of national money on our internal highways and harbor improvements. Much of this amount has been practically wasted, rendered ineffectual in commercial effects, because there has been no adequate control and regulation of water fronts or wharfage facilities, or, if such control exist, that control has been too largely influenced in the interests of the land competitors themselves. Water competition is needed as a corrective of land rates and services. Water freight service is needed also to give the food products of regions tapped by water lines every available access to markets to the end that the food output of every section may have its due effect on national supply and national prices, and to the end that the food products of the entire nation, and indeed of the entire world, may respond to the wants and needs of the consumers in every section of the United States. Of deep import to future water competition is the recent far-sighted action of the Interstate Commerce Commission in placing under its own supervision the wharves and the tracks leading thereto owned by rail carriers engaged in interstate commerce, and used in receiving and delivering property moving by railroad in interstate and foreign commerce. Such regulation should lead ultimately to improved water service. It must be supplemented by national, state and city action.

The Committee on the Merchant Marine and Fisheries of the national House of Representatives, after an extensive and thorough investigation,¹ concluded that:

¹Volumes 1-4 "Proceedings of the Committee on the Merchant Marine and Fisheries in the Investigation of Shipping Combinations under House Resolution 587." Eighty such agreements or understandings, involving practically all the regular steamship

“The almost universal practice for steamship lines engaging in the American foreign trade is to operate, both on the inbound and outbound voyages, under the terms of written agreements, conference arrangements or gentlemen’s understandings, which have for their principal purpose the regulation of competition through either (1) the fixing or regulation of rates, (2) the apportionment of traffic by allotting the ports of sailing, restricting the number of sailings, or limiting the volume of freight which certain lines may carry, (3) the pooling of earnings from all or a portion of the traffic, or (4) meeting the competition of non-conference lines.”

In view of these facts, the Committee recommended in substance: (1) That the jurisdiction of the Interstate Commerce Commission be extended to the interstate port-to-port traffic of domestic water carriers, with full power to require all such carriers to file their port-to-port rates and to submit reports of their financial and business operations. As regards interstate port-to-port traffic the Commission should be given full power to regulate rates and to determine maximum charges. (2) That water carriers be required to file for approval with the Interstate Commerce Commission all agreements or arrangements affecting interstate transportation, whether written or oral. (3) That the carriers be prohibited from granting rebates of any kind to shippers and from discriminating between shippers in rates, in the giving of space accommodations and other facilities, and in the making of unfair contracts based on the volume of freight offered. (4) That the railroads be prohibited from making the through rail-and-water route unprofitable as compared with the all-rail route by charging more for the same service on water-borne commodities lines operating on nearly every American foreign trade route, are described in the foregoing report.

than they charge for the proportionate share of the all-rail haul. (5) That railroads be required to make their terminal facilities available to water carriers on equal terms and under such reasonable conditions as the Interstate Commerce Commission may prescribe. (6) That there should be legislation providing for equal treatment to all shippers and water carriers by transfer and light-erage concerns when forming a link in interstate or foreign commerce.

The tariff is the third factor of special significance in preventing the transportation service above described, especially oceanic freight, from having its whole effect on stable prices in food supplies. Nothing could be more ludicrous than the statement made by a national party in its recent platform that the tariff has no effect on prices. One purpose of the tariff is to raise prices. Its effectiveness hinges solely upon the extent to which prices are made and kept higher. There may be and no doubt are sound arguments for the tariff, but lower living costs is not one of them. No principle as to just what extent the tariff raises living costs through inhibiting free national and international exchange of products can be stated, as the effect of any given schedule will depend on numerous other factors. However, the upward limit to which the tariff can force prices is evident: it is the cost abroad plus transportation, insurance, cartage and similar costs; and, of even greater psychic influence, to these costs must be added the power of the American concern to freeze out foreign competitors by threatening or merely having potential power to lower prices whenever such foreign products are shipped to domestic markets.

A few examples of the effects of the tariff on living costs must here suffice. Congressman Andrew J. Peters of Massachusetts has recently prepared a table to show

that the former tariff on sugar meant an annual increase of over \$140,000,000 in consumers' prices. Of this amount but \$52,000,000 went into the federal treasury. A 30 per cent. tax on sewing machines put into the federal treasury but \$23,000 annually or less than one-third of one per cent. of the value of the sewing machines our manufacturers exported, and yet this tax causes every purchaser to pay 30 per cent. more for his machine. During the three months ending March 31, 1912, the United States imported \$3,419,065 worth of potatoes from foreign countries, on which there was a tariff of twenty-five cents per bushel—a total levy on the consumers of \$1,666,007.50. This represented but slightly the total increased costs paid by American consumers for their potatoes, because the tariff of twenty-five cents a bushel practically inhibited competition from abroad and thus caused practically a twenty-five-cent increase on every bushel of potatoes consumed in the United States during a possible importing period. At the clamorous demand of German housewives, the German government reduced its prohibitive import duties on meat by over one-half and the inland railroad charges one-third.

The tariff inhibits free international exchange of goods and thereby, by causing a greater dependence upon the chance output or productiveness of a given section of the United States, makes for instability in American wholesale prices with consequent higher average prices to American consumers. In other words, the American consumer is now paying many times over the subsidy granted to manufacturers and producers through the tariff.

Cold storage, the modern method of arresting food spoilage and preserving foods, is the second factor that makes for uniformity in wholesale prices and reliability in food supply. Cold storage has been used to a suffi-

cient extent to exert an influence on prices only from about 1893, but within the last dozen years it has come to be a factor of first importance in food distribution, food supply and food costs.

The best figures obtainable indicate that there are between seven hundred and eight hundred cold storage warehouses in this country, with an aggregate capacity of approximately 200,000,000 cubic feet of space. In addition to this, there are 2,000 or more private warehouses. Through the public warehouses there pass annually about 1,320,000 carloads of perishable products, valued approximately at \$600,000,000. This is exclusive of the 16,000,000 pounds of fresh meat which are refrigerated in packing houses and public markets. Such figures give some notion as to the extensive use and vital significance of cold storage and the amount of capital and effort put into the cold storage business.

A modern warehouse is of concrete construction, with cork or mineral wool insulation, and, as has been pointed out by Dr. M. E. Pennington, "is far cleaner than the butcher's ice-cooled box, and infinitely ahead of the house refrigerator as commonly kept by the present-day servant." Refrigeration is produced, not by ice, as is commonly supposed, but by mechanical means, and is distributed by pipes carrying calcium chloride brine or liquid ammonia which may be -20° F. The temperature usually maintained must range from about 40° F. in the case of soft vegetables to 29 to 50° F. for eggs, 10° F. for poultry and meat, and -10° F. for butter and sometimes fish. Not only are the products usually thought of as perishable preserved by cold storage, but refrigeration is also used to preserve cereals, nuts and similar food from weevil and other vermin.

Cold storage charges seem not to be excessive. The relatively large number of private warehouses, together

with the relative ease and low expense with which warehouses can be conducted, and their great convenience to their owners, have all tended to keep cold storage charges down to a point where the maximum usefulness and economic results of food preservation through refrigeration are consistently obtained. This fact can be illustrated by a few typical cold storage charges. The cost of storing cheese ranges from one-eighth of a cent for four months or less to three-eighths of a cent for three to six months. The total cost of carrying eggs in storage over the ten months from April to January, including not only the storage charge but also the interest on the investment and the cost of insurance, is from two to two and one-half cents per dozen. The Committee on Markets, Prices and Costs of the New York State Food Investigating Commission has revealed in detail in the appended table¹ that the total increase due to cold storage for six months for the products indicated, including insurance .416 and interest at 6 per cent., ranges from \$.007 to \$.582.

The proper use of refrigeration will prevent waste and decay and thus make extensive savings which must ultimately be reflected in lower consumers' prices. About

¹ ANALYSIS OF STORAGE CHARGES ON FOOD PRODUCTS AT HYPOTHETICAL COST PRICES IN NEW YORK CITY

COMMODITY	Hypothetical Cost Price	Storage Charge for 6 mos.	Insurance at .416 for 6 mos.	Interest at 6 per cent. for 6 mos.	Total Storage Charge	Increase in Cost Due to Storage
Butter.....	.25 lb.	.01	.000725	.0075	.268225	.018
Poultry.....	.18	.01	.000522	.0054	.195922	.016
Eggs.....	.20 doz.	.0089	.00059	.006	.21549	.016
Cheese.....	.15 lb.	.006	.000435	.0045	.16095	.011
Dried fruit.....	.10 lb.	.00333	.00029	.003	.106623	.007
Nuts in shell....	.15 lb.	.0075	.000435	.0045	.162435	.012
Nuts shelled....	.30 lb.	.005	.00087	.009	.31487	.015
Green fruit.....	2.50 bbl.	.50	.00725	.075	3.0825	.582

N. B.—Storage charge on six months' basis, New York rates. Insurance charge on six months' basis, Beach Street rates, .416. Interest charge on six months' basis, 6 per cent.

Report of the Commission on Markets, Prices and Costs, p. 42.

8 per cent. of our total egg production now goes to the dump each year for the want of proper handling and refrigeration, while the loss on both poultry and eggs totals \$75,000,000 annually. Most if not all of this loss could be avoided through proper handling and refrigeration. Of the 8 per cent. loss in eggs, 5 per cent. (4.86 per cent.) occurs between the farm and the market, and only 3 per cent. (3.48 per cent.) occurs after the goods reach the market center. This waste in the egg supply is occasioned in the first place by improper gathering of eggs on the farm. Out of a certain number of eggs, marketed in a given time and a given year by a typical farmer, only 25 per cent. were found to be firsts, while, due to long holding, 60 per cent. were seconds. In the second place, there is loss due to a long wait at the station without refrigeration, and then by being taken by a slow, hot pick-up freight car to the packer. This loss could be eliminated entirely by prompt and proper gathering of eggs on the farm, proper refrigeration of the pick-up freight car, and shipment via refrigerated warehouses, chilled rooms at the jobbers and commission houses, to the cold storage vaults of the retailers and the ice-boxes of the consumer.

During the year 1911 the city of New York condemned in its markets 72,785 pounds of eggs, 350,755 pounds of fish and 200,000 pounds of poultry. During the year 1912 the pure food inspectors of Massachusetts found it necessary to condemn but 300 pounds out of a total of 43,000,000 pounds of perishable produce stored in the refrigerated warehouses of the state. These figures serve as significant indices of the relative amounts of food loss through no refrigeration as compared with cold storage. Significant national economies can unquestionably be effected through the extended use of food conservation by cold storage.

Cold storage moreover equalizes the supply and puts the output of each season and each section of the country and indeed of the world at the disposal of each and every section of the United States. Thus only through preservation by cold storage can we have seasonable poultry throughout the year. Dr. Mary E. Pennington, the nation's leading expert on the chemical and bacterial changes occurring during cold storage, has shown that the chemical changes in poultry kept hard frozen at 10° F. for twelve months are less, and that such poultry is, therefore, more wholesome than is poultry kept for five and one-half days at the temperature of the average house ice-box, that is, 50° to 55° F. The average season for broilers throughout the United States is from late May to August and for roasters from September to December. Through cold storage only can we have good broilers and roasters throughout the year. Through cold storage only can we have turkeys after the middle of January.

Cold storage not only preserves the seasonal output of each section of the country, for use at any time throughout the year, but it also makes the output of each section at once available to all sections of the country. Each section of the country can with cold storage adapt itself to those products and industries in which there is the greatest profit under a national supply and demand. Cold storage thus makes it possible for each community to specialize in the produce which it can most economically produce. Cold storage gives to food produce a national market independent of local supply and demand.

Formerly the weather and the near-by village demand set the price and put the limits to the amount of Wisconsin cheese produced; with cold storage the markets for Wisconsin cheese are national and prices stable through the year. Through cold storage early vegetables are now

produced in the South to be sent to consumers everywhere and the cars that convey meats southward return laden with fruit and truck. To cold storage largely is attributable the fact that Florida's rural population increased from 1900 to 1910 three times as fast as the average increase of rural population in the United States.

The effect of this extended use of cold storage is nation-wide stability in wholesale prices and nation-wide reliability on ample supplies of all foods that can be preserved through refrigeration. With cold storage, butter can be kept wholesome for a period of twelve months. The season of flush supply for butter is June, July and August; the season of short supply, November, December and January. During the decade of 1880-90 the wholesale price of butter in the New York market ranged from $20\frac{1}{2}$ cents during the flush months to $33\frac{1}{2}$ cents during the scarcest months; during the decade 1900-10, under cold storage, the prices for these two periods were respectively $22\frac{1}{4}$ cents and $25\frac{1}{2}$ cents for finest cold storage butter, and $27\frac{3}{4}$ cents for fresh butter.¹ During the decade of 1880 to 1890 eggs ranged in price from $15\frac{1}{4}$ cents during the period of flush supply to $26\frac{3}{4}$ cents during the period of scarce supply; in the decade from 1900 to 1910, prices ranged for these periods respectively from $17\frac{1}{4}$ cents to $21\frac{3}{4}$ cents for cold storage eggs and $29\frac{1}{4}$ cents for fresh eggs. A comparison of the prices of both poultry and eggs during the periods

¹ Primarily because of the cooler weather and because of the better condition in which the egg reaches the market, eggs stored during the earlier spring months, especially during April, can be preserved for use the following January. "So far as our knowledge goes now," says Dr. Pennington, "a fresh egg held at a temperature of between 29° F. and 31° F. will be an edible, wholesome egg at the end of nine months." Eggs laid later in the season must be consumed first, for instance, June eggs in October.

of flush and scarce supply in the decade previous to cold storage with their prices in the decade when cold storage was used extensively indicates that cold storage has meant higher prices for producers and lower prices for consumers.

It is clear, however, that the maximum economic effects of cold storage would be curtailed by any law placing an undue restriction upon the time that produce can be held in cold storage. The time limit should be determined by the laboratory and the food expert and not by the arbitrary acts of some legislator.

The third factor making for fluidity and acceleration and thus for stability is the method by which crop reports are issued. It is primarily upon these reports that the produce exchanges in the primary markets of the United States base their prices, both on current production and on futures.

Information as to crop and harvest conditions is secured by the Bureau of Statistics of the United States Department of Agriculture, the most highly organized crop-reporting department in the world. This bureau has about fifty statisticians and clerks in the city of Washington, fifteen to twenty traveling reporting agents outside of Washington, a state agent paid for part of his time in each state of the Union, and 3,000 county correspondents and 30,000 township and other local correspondents giving voluntary service as crop reporters. The bureau thus secures at least four classes of reports as to acreage, condition and output of the crop in each section of the country.

The reports by the state agents and by the special traveling agents are sent directly to the Secretary of Agriculture, and deposited in a safe until the crop-reporting board meets on a stated crop-reporting day. The reports from county and township correspondents are

sent to the Statistical Bureau, where they are assembled and averaged. The summarized results are placed in the secretary's safe until the crop-reporting board is in session. On what is known as report day, the statistician, with four assistant statisticians and agents, receives the four classes of reports in a meeting behind closed doors. From these four classes of reports the board arrives at state averages and totals, and national averages and totals as to crop conditions, including the leading facts as to acreage and condition of each crop in each and every locality. At a stated hour this report is sent world-wide by telegraph and telephone. When received in the trading pits of the primary markets, such as New York, Chicago and New Orleans, it is instantly transmuted into prices.

To this national crop-reporting agency is now being added an international crop-reporting agency. It is proposed that this agency have headquarters at Rome, in the new International Institute of Agriculture, which has already a Bureau of Agricultural Statistics collecting world-wide data and supplying these facts to the forty-nine adhering countries. This would make a world-round stable price for all farm products. Each of the great produce exchange concerns has also its own crop-reporting agents at work, not only in this country, but in all other countries as well. Thus prices of farm products are based on crop conditions, not only in every section of the United States, but in every section of the world.

In addition to these reports, there is now needed publicity as to the holdings in cold storage warehouses. These food holdings are of as great moment in fixing prices as are crop conditions. Without them it is impossible to get at all the resources of the nation.

This knowledge as to crop conditions of the nation and

of competing nations as well takes a large speculative element out of price-making and therefore has a most definite tendency to keep wholesale prices stable and wholesome. The function of transmuting this knowledge into prices is performed by trading pits. In these there are no doubt abuses that proper legislation and publicity must eliminate. Their importance also demands facilities and assistance. To both these subjects attention is given in the following chapter.

The fourth factor making for fluidity in wholesale prices and for an equalized food supply is the practice known as diversion of shipments or selling in transit. The progress of cars or vessels can be reported by wire and diverted from their course at any time by a telegram. Through this practice food products from any section of the country may be sent even after transit has started to the point offering most favorable markets. If a car of cattle, for instance, is consigned from a Kansas shipping point to Chicago, it may by telegram be placed on sale at either Kansas City or Omaha should prices at either of those places indicate greater returns than the probable price upon arrival at Chicago. This is a common practice in the livestock trade. Grain billed through from Nebraska or Minnesota to points in the Middle West or to Atlantic points may be diverted on almost any day to any other point in the United States. Thus should prices be higher for any reason in Cincinnati, or Pittsburgh, or Philadelphia, the car would be directed to that point in lieu of going on to the point to which it had been consigned but where local prices were not so high. The selling-in-transit plan is used in shipping fruit by rail from California or other southern or southwestern points. A similar method is used in diverting trans-oceanic shipments to points where higher wholesale prices may be secured. For instance,

a cargo of wheat, corn, barley or other farm produce is thus consigned "for orders" to some port in the British Isles, such as Queenstown or Plymouth. After the vessel starts, the exporter tries to secure a purchaser at the best available market. Upon arrival at port of first destination, the vessel receives orders to embark at once for a given port where sale has been made. When it is remembered that the United States exports yearly from 7 to 28 per cent. (on an average of 25 per cent.) of its domestic grown wheat, and 2 to 10 per cent. (on an average of 5 per cent.) of its domestic grown corn, it will be seen what this method means in the way of securing the most favorable price for farm produce and in making the price on foodstuffs practically a world price.

The selling-in-transit method makes for stability in prices, because the moment local supply or demand causes higher prices, the cargoes nearest to the point are at once diverted there; it makes for mobility in food distribution, as even shipments already en route to another place are instantly diverted by telegraph. The producer, to be sure, loses the occasional high local market, but in its stead he has at his doors a stable nation-wide market. And the consumer has his choice of the output of every section of the country, and that at nation-wide wholesale prices.

It is difficult to overemphasize the far-reaching effect of these four agencies of food distribution upon the value of the farming land in each section of the United States, upon the output of farms, upon the prices received by farmers, upon the prices paid by consumers and upon the character and variety of the urban dweller's food supply. Their perfection and extensive use have made possible the increased value of Iowa farms, \$2,600,000,000 from 1890 to 1910, while

Pennsylvania farms in the same period, because of western competition, increased in value but \$200,000,000. Through their development and use, the farmers of the Middle West and of South America and of Russia are more potent factors in fixing the wholesale price of the leading cereals in New York City, for instance, than are all the New York farmers themselves combined. Of the potatoes eaten in Philadelphia, far more are grown abroad than in Pennsylvania. The cantaloupe season now extends over five months of the year in many markets. Kansas City gets its lettuce from California, Florida, Louisiana, Texas, Arkansas, Colorado and New York.

Producers everywhere must reshape their output and their marketing methods in the light of these four factors in food distribution. Local farmers no longer get their early market prices, but instead they now have a nation-wide market. Thus by the time the output of Pennsylvania orchards and gardens is marketable, city consumers throughout the community have long since been supplied with exactly those articles, at relatively slight transportation costs and with practically no deterioration, from Texas, Florida, and other southern fields, orchards and gardens. The first shipment of early southern vegetables to northern states was a boatload from Norfolk in 1855. In 1912 the Pennsylvania railroad alone hauled nearly 100,000 cars of southern truck products to northern markets. Southern truck farms are consequently going up in value.

By multiplying and diversifying the markets available to the growers of any one section these factors have assured stability and better producers' prices. Thus North Carolina fruit growers and truck growers some years ago shipped not over four hundred cars of strawberries to not over twelve different markets. The result

was a glut in these markets with lower prices to strawberry growers. Through the use of the factors above described, these same growers now ship 3,200 cars of strawberries to eighty-two markets, receive a better price and make a more stable price for consumers. Western New York has a choice of two hundred and seventy-five markets for its peaches; higher prices for producers and reliable prices for consumers are the result. These nation-wide forces, no doubt, largely account for the increase of 58 per cent. in the wholesale price of ten leading crops for the period 1907 to 1912, as compared with the period from 1893 to 1896. The effectiveness of these four factors on producers' prices and producers' methods can, no doubt, be largely increased through national, state and city reports on consumers' prices.

As great as is the effect of these forces upon producers' prices and producers' methods, their effectiveness on the wholesomeness, variety and price-reliability of the city's food supply has been even greater. The city consumer can now have strawberries from February, when the Florida strawberries come to market, until the latter end of July, when strawberries come in from northern United States. Of maximum effectiveness on the price of cold storage eggs is the fact that through these forces the urban consumer can be supplied with fresh eggs from Kentucky and Tennessee from December to April; from Texas, Southern Ohio, Missouri and Kansas from March to April; from Iowa, Kansas, Illinois, etc., during the summer; and from Minnesota and Michigan during the late summer. The resident of New York City now gets his Cape May cauliflower four weeks before he used to be able to get cauliflowers from Long Island.

Such factors as these have made the world the city's truck patch and the sea its harbor.

CHAPTER VI

THE MIDDLEMAN

The "middleman" has been held responsible for it all. The widespread publicity of consumers' versus producers' prices in the last few years has left the impression with many that some useless "middlemen" were simply in the way, and that society was paying them to get in the way. Distribution costs such as are depicted in the chapter by that title are recounted to show that the total cost of collecting goods at the farmers' station and delivering them to the consumer was larger than the price received by the farmer for his goods, despite his larger work and outlay—"the farmer's thirty-five-cent dollar," the phrase has it. Food products must pass from farmer to country buyer, to jobber, to retailer, to consumer. This route of itself was put in evidence to prove that the middleman was to blame for higher prices. Still others added the carter between each of these classes of middlemen and made food distribution sound like a baseball game, at which the consumer pays the costs and the players get the proceeds: from farmer to country buyer, to railroad, to carter, to wholesaler, to carter, to jobber, to carter, to retailer, to delivery boy, to consumer,—and the ball has gone through the hands of the whole nine.

And such is the route that products follow. But *is* the middleman useless? Does he perform no economic function? May he be wholly eliminated and produce be sold directly from farmer to consumer?

These queries are best answered by a critical study of the work performed by each class of these middlemen from country buyer to retailer.

The country buyer locates the produce, assembles it into car lots, chooses the best market and finds the buyer. He assumes the risk of falling prices and of misrepresentations by farmers as to the sorting and packing of their goods. What he pays the farmer will also depend largely upon what the farmer's business and credit relations are with him. The compensation he receives for his work and risks is the difference between the price he pays the farmer and the price he receives from the wholesaler or jobber.

The wholesale receiver must be a market specialist both as to the demand and supply. He must locate quantities in the country in car or train lots, and hunt buyers, usually the jobber. He must inspect goods to see if they are as represented and must repack and resort them if that has not been done reliably and to the best interests of the market. He is, therefore, by nature a "bear" on grades. Formerly this work was done solely on commission. At the present time, as is pointed out more particularly in the chapter on A Shorter Route from Producer to Consumer, the wholesaler is turning jobber and buying his produce for cash. The custom of selling on commission, however, still prevails in the livestock and grain trades.

The commission charged does not seem to be excessive. For selling fruits and vegetables, the commission ranges from 5 to 10 per cent. of the gross proceeds of sales. The rules of the Minneapolis Chamber of Commerce fix the minimum rate for selling wheat, barley or rye at one cent per bushel; for selling corn or oats, at one-half cent a bushel. About the same charges prevail in other large markets. In the livestock trade, in South

Omaha, Nebraska, the commission charged is much less than 1 per cent. of the sales. As has been shown in the chapter on The Cost of Food Distribution, the total charges for selling through commission men, including haulage, cartage, freight, etc., does not exceed 10 per cent. Moreover, the rate of commission has no doubt been very materially lowered in recent years, and there is every evidence of virile competition between the commission houses. A commission merchant who has been "in the business for twenty-eight years," writes the author: "I think from my experience that the jobbers and commission merchants are making less money on the fruits and vegetables."

Some commission men furnish credit and others advance money. Indeed, the marketing of farm products is financed to 90 per cent. of its value on borrowed funds. These funds are, to a large extent, borrowed through the middleman, usually the wholesaler or jobber. The country shippers often find it impossible, when their own capital becomes tied up, to continue to buy farmers' produce. Then it is that the commission firms supply credit, the security for which is expressed either in bills of lading or warehouse receipts.

The jobber is the specialist in what retailers want and what wholesalers have to sell. Through the jobber the retailer gets just the goods he wants. The jobber must often sort and pack to suit the wants of retailers; and, as he is selling at the best price possible, he tends to be a "bull" on grades. His profit is expressed in the difference in price between what he pays the wholesale receiver and what he gets from the retailer. The reason for his existence is that retailers are unable to get directly from the farmer or the wholesaler exactly the grade and quantity of farm produce desired. The distinctive feature of the changes in food distribution in

the last decade has been the rapid growth of the cash-buying jobber to a point where practically all the perishable foods are now handled by this class of middlemen.

The jobber and the commission merchant must also be specialists on the conservation of foodstuffs by cold storage or other means. In order to sell to retail agencies in desired amounts, at the time and place wanted, the jobber must be equipped with a suitable delivery service. His trade, therefore, suffers from all the fluctuations and variations in demand and supply, so disastrous to the retailer. Thus, if the weather is attractive, and housewives venture forth in large numbers to open markets, the demand for the jobber's goods must necessarily fall off. A sudden rise in the price of sugar will materially affect the possibilities for the jobber's getting rid of even a normal amount of fruits.

The functions of the retailer are so evident as to need slight mention here. Those who talk of "eliminating the middleman" usually do not include the retailer any more than they include the railroad in their definition of middleman.

Definite functions are likewise performed by the produce exchanges and other organizations of commission men and jobbers. A typical example is the Chicago Board of Trade with 1,608 members. Of these, 469 have headquarters outside the city of Chicago, many as far distant as Philadelphia. Of the 1,608 members, 788 are commission merchants, 341 grain brokers, 40 bankers, 47 packers, 122 brokers, etc. In the St. Louis Exchange there are 1,214 members. The real estate holdings of the Minneapolis Chamber of Commerce now represent an investment of over \$1,000,000. Membership in that organization is worth in the neighborhood of \$4,000, though a high-water mark of \$5,000 has been reached.

These exchanges fix the ethical and business standards for their members, penalize their members for uncommercial conduct, and, in general, fix the business standards for their trade. For example, a rule of the South Omaha Live Stock Exchange reads: "Any member of this Exchange, or firm in which he is a partner, or corporation in which he is a stockholder, or his or their employee, who shall circulate false or misleading statements of any kind or character concerning a member of this Exchange, or circulate or cause to be circulated any report concerning the attitude or action of any member, relative to the passage, or proposed passage, of any Rule or Amendment to any Rule of this Exchange, for the purpose of injuring the business or credit of such member or securing a consignment of livestock, or any member soliciting a shipment after same has been consigned to another member, either in transit or after arrival at the Stock Yards, shall be deemed guilty of a violation of this Rule and for the first offense shall be fined in any sum in the discretion of the Board of Directors; for the second offense \$250.00; for the third offense any sum not exceeding \$500.00, or expulsion from the Exchange, or both, at the discretion of the Board of Directors."

These organizations also fix the minimum commissions which their members may charge. The advantage in this uniformity is that all shippers to that particular market are treated alike. Such a rule further tends to protect the shipper from exorbitant charges. The exchanges also fix the grain storage rates,¹ regulate the

¹ The Board of Trade of Chicago has fixed the following rates for the storage of grain: not in excess of one cent per bushel for the first ten days or part thereof, and one-thirtieth of one cent per bushel for each additional day thereafter so long as such grain or flaxseed remains in good condition.

inspection, grading, weighing, storage and shipment of grain, the brokerage rates for the various types of service rendered and the deposits necessary for the fulfillment of time contracts. They frequently interest themselves in the rail and water rates charged into and out of their market, and disseminate business information useful to their members. The Merchants' Exchange of St. Louis spends annually from sixteen to seventeen thousand dollars for market reports and telegraphic service. The constitution of the National League of Commission Merchants states the objects of the League among others to be: "To concentrate action upon the general welfare of the trade, in uniting our efforts with growers and producers against the enactment of damaging laws, in collecting and disseminating information, in improving business methods; in protesting against testimonies, executions and damages to transportation; in demanding integrity and financial responsibility and in the protection of all, as far as possible, from freight misrepresentation and injustice." The Wholesale Growers' Exchange of Chicago is organized for "the purpose of exchange of credit information and the handling of such matters of common interest as pure food legislation, railroad rates, etc."

And, finally, through the sales of "futures," that is, selling in January, say, the wheat crops of the next July, these primary pits guarantee stability in price alike to the grower and the retailer. It is in the primary markets under the control of these exchanges and organizations that the countless economic and agricultural forces of this and other countries are transmuted into stable wholesale prices. In this way, too, these exchanges furnish a continuous market, make possible the discounting of the future, help to regulate the rate at which the year's crop is con-

sumed, and serve to level prices between different markets.

The vast amount of food products moved each year further points to the effective service rendered by these market specialists called the middlemen. The livestock on the farms of the United States is worth in excess of five billion dollars. Much of this amount annually flows through the livestock markets. The Chicago livestock market alone handled 7,180,967 head of stock in the year 1912. The value of the crops of corn, winter wheat, spring wheat, oats, barley, rye, buckwheat, hay, flax-seed, tobacco, and potatoes (Irish) in the United States in 1912 was \$3,883,026,000. At the St. Louis Merchants' Exchange, in 1913, 352,215 barrels and 215,315 boxes of apples were received; of oranges, lemons, and grape fruit, the receipts approximated about 1,500 to 1,800 cars, and of the latter upward of 1,200 cars. The receipts of grain and wheat in 1913 at Duluth and Superior were: grain, 112,560,717 bushels; wheat, 81,168,109 bushels. St. Louis, in 1913, shows the following receipts: grain, 80,498,694 bushels; wheat, 31,258,471 bushels. In New York City, in 1912, 4,723,520 cases of eggs were received. Some idea of the receipts of domestic produce in the last-named city can be gleaned from the following figures for 1912: receipts of flour, 2,432,909 barrels and 8,732,607 sacks; of wheat, 45,976,100 bushels; of corn, 7,463,972 bushels; of oats, 24,152,650 bushels; of barley, 7,070,864 bushels; of flax-seed, 5,229,013 bushels; of cheese, 712,440 boxes; of pork, 30,722 barrels, etc. The commercial production of apples in the United States last fall (1913) was approximately 15,650,000 barrels, or about 96,850 minimum carloads. Thirty-five states participated in the production of this crop. The total production of potatoes for the year 1913 was 328,550,000 bushels, equivalent to 657,-

100 minimum carloads. For the previous year the production was 420,000,000 bushels. The handling of these vast quantities, their concentration into car lots, their subdivision into quantities desired by the consumer—these are three of the many functions of “the middlemen.”

The conclusion that must inevitably be reached is that, under present usages as to sorting, packing, standardizing, and conserving food products, all four types of middlemen will long be with us. A revolution must take place in the farmer's marketing methods before the country buyer will cease to exist. In the commission merchant, or wholesale receiver, is a market specialist essential to handling the huge quantities of livestock and foodstuffs necessary to satisfy the daily hunger wants of over fifty millions of city people. The amount of business done by the cash-buying jobber is the characteristic development of the last decade. The retailer's buying methods must be completely changed before the city jobber will have no part in the routine distribution of food supplies. And if the tendencies of the last few years are taken as a guide, the number of retail establishments is distinctly to increase rather than diminish.

But to say that each type of middleman will long be with us is a very different thing from saying that the majority of foodstuffs must continue to pass through the hands of all four classes of middlemen. As is pointed out more fully in the chapter on A Shorter Route from Producer to Consumer, the farmer may sell, whether singly or coöperatively, to the retailer. The country buyer may sell to the retailer, or the consumer; the commission merchant may turn jobber and buy from the farmer to sell to the retailer. The retailer may buy from the farmer direct or the farmer may sell to the consumer. Many are the economic and social forces now

making for a more direct and less expensive routing of food products. Each of the four types of middlemen will long persist, no doubt, but routine food prices in the future will probably not be based as they now are on the cost of routing food through all four of these classes. The route is distinctly to be shortened.

But many are the prerequisites to a more direct routing of foodstuffs. First of all, the facilities for storing and preserving large quantities will have to be materially changed. There must be reliable standards of nation-wide acceptance. The securing of uniform nation-wide standards in grades and packages seems most feasible through producers' coöperation, and hence a later chapter is given over wholly to this subject. An example of what can be done are the results and standards already secured in the grain trade. This work was begun in grain pits in the primary markets and was followed up and supplemented first by state and finally by national action. The national Secretary of Agriculture was authorized by an act of Congress, of June 30, 1906, and March 4, 1913, to fix definite grades of grain. The need for national standards even in grains, however, is reflected by the following differences between grade 1 of corn, according to standards set by national government and by various exchanges:

GRADE 1—CORN

UNITED STATES: 14 per cent. of moisture; 2 per cent. damaged corn, exclusive of heat, damaged or mahogany kernels (max.); foreign material, including dirt, cob, grains, finely broken corn, 1 per cent.; "cracked" corn, not including finely broken corn, 2 per cent.; must be sweet; white corn, 98 per cent. white; yellow corn, 95 per cent. yellow; mixed corn, corn of various colors.

DULUTH: 15 per cent. moisture; sweet, white corn, 98 per cent. white; yellow corn, 98 per cent. yellow; mixed corn, various colors, sound, plump, well cleaned, 15 per cent. moisture.

CHICAGO: 15 per cent. moisture; cob rotten, exclusive of bin burnt or mahogany corn, 1 per cent.; dirt and broken grains, 1 per cent.; sweet; white corn, 99 per cent. white, well matured; yellow corn, 99 per cent. yellow, well matured; mixed corn, various colors, sweet, well matured.

The need for standardization in other grains, regarding which the national government has as yet taken no action, is indicated by the following differences in the standards for rye and wheat in the primary markets of New York, Duluth, and Chicago.

NEW YORK	DULUTH	CHICAGO
	<i>Rye</i>	
No. 1—shall be sound, plump, and well cleaned.	No. 1—shall be sound, plump and well cleaned and weigh not less than 56 lbs. to the measured bushel.	No. 1—shall be dry, sound, plump, sweet and well cleaned and weigh not less than 57 lbs. to the measured bushel.
	<i>Northern Spring Wheat</i>	
No. 2—shall be sound, reasonably clean, contain not less than 40 per cent. of the Hard varieties of Spring Wheat and weight not less than 56 lbs.—Winchester standard.	No. 2—shall be dry, spring wheat, not clean enough or sound enough for No. 1, but of good milling quality and must not weigh less than 56 lbs. to the measured bushel.	No. 2—shall be northern-grown spring wheat, not clean or sound enough for No. 1, and must contain not less than 50 per cent. of the hard varieties of spring wheat, and weigh not less than 56 lbs. to the measured bushel.

The urgent need now is for standardization in fruits and vegetables. Nature has already done much to standardize products, provided she be encouraged by careful and scientific choice of seeds. A leading seed firm in a

recent prospectus states that "50 per cent. of the seeds that are now being sold to our gardeners come from inferior stocks." The standardization of seeds and the standardization of growing processes can readily give us a standard product and this standardized product can have definite, reliable grades of national significance. Of as great importance to minimum marketing costs is the standardization of containers. So long as beans are marketed as they are, in bushel hampers, in five-eighths-bushel baskets, in barrels, half-barrels, bushel boxes, one-third-bushel boxes, the gallon and its small divisions, box crates, hamper baskets of 28-quart and $1\frac{1}{4}$ -bushel capacity, and in 32-quart berry crates; so long as beets are marketed in bushel hampers, fractional bushel baskets, stave baskets, baskets of greater than a bushel capacity, standard barrels and their fractions and in 32-quart crates as may fit the imagination or tradition of the grower, so long as there is such heterogeneity as this in containers even in the same locality, let alone in the same state or primary market, so that no one container is typical for any one product on any one market, just so long will it be impossible for the retailer or other buyer or seller to know how much or what grade he is ordering. To approach accuracy, to make produce available, to make prompt ordering possible, to facilitate sales, to conserve space in carriers and in storage, attention must first be given to the standardization of containers.

The costs incident to food distribution can definitely be lowered by removing two obstacles. The first of these is the incomplete and unsatisfactory terminal shipping and storage facilities available to the middlemen. It is a sound maxim that the first step toward social efficiency is to do away with useless costs to business men. The improvements in existing transportation facilities and the coördination of food distributing agencies

are discussed at length in other chapters of this volume. The second is the elimination of certain abuses which have arisen in the food distributing world. That there are many abuses and unwholesome practices among certain types of middlemen which result in the levying of heavy tribute moneys cannot be doubted. Farmers are already too familiar with such practices as reporting goods to be sold as low-grade when they were sold as high-grade; reporting half the chickens dead when 5 per cent. were dead; and the making of improper returns. Another practice is to lower the published quotations on goods sold, so that it appears one or two cents below the price at which sales were actually made. This fact was brought out in the recent action of the federal government in imposing a fine on the market commission of Kansas City. Still another practice is to misrepresent the time of a sale. For instance, if potatoes sell at thirty-five cents a bushel in the morning, and the price rises in the afternoon to thirty-eight cents, the commission man reports sales as occurring in the morning, and pockets the difference. Again commission men often turn dealers or get a pecuniary interest in some retail establishment, and thus violate the first principle of agents: their returns are then no longer based on getting the maximum price for the producer but on paying him the minimum price that they may get the added profits through retailing. And, finally, there are the possibilities of abuses in the pits of the primary markets, such as securing a monopoly through a "corner" on "futures."

These practices are of concern to all because they mean lower prices to farmers, and, therefore, less purchasing power in the country; they mean the undermining of the business of the honest wholesaler and jobber because shipments are sent elsewhere; they destroy confidence in the city to which goods are sent, as marketing places,

thereby decreasing selling facilities; they make it more difficult for producer, retailer and consumer to get proper prices for their goods, and to get goods at proper prices.

In casting about for means by which such abuses and practices can be eliminated, the first step, no doubt, is to do away with certain dishonest practices by producers themselves. The very fact that farmers are selling to men far from home has led to questionable practices which require the wholesaler to adopt like questionable practices in order to protect himself. So long as farmers put the culls at the bottom and primes at the top of the barrel, the wholesaler will be tempted to report sale at a lower grade than that at which he actually sold, in order to compensate himself for the lower price for the inferior grades when the goods are repacked. This all necessitates the unnecessary expense of repacking and regrading, which inevitably cost more in the city than on the farm. Again, farmers are neglecting to study their markets and pack so as to get top prices and adapt their produce to the local demand. The remedy here is in higher moral standards for individual farmers, in standardizing goods, and in coöperation among producers. The latter is so important that a large part of another chapter is devoted to it.

A second means of abating such practices is to give greater publicity to sales by extending the custom of selling at auction. There are now three ways of selling at wholesale: (1) selling through jobbers or commission men at their own prices; (2) fixing a general price-current by experts; (3) selling by auction. Only the two latter methods need explanation.

The fixing of a producer's price-current is done as follows: first, there is a canvass of the market, including receivers, sellers and buyers, by professional can-

vassers. This canvass is completed by one o'clock. The results are used for the compilation of the average current price and the "producers' price current" is printed and is ready for both buyer and seller by three or three-thirty in the afternoon. The goods were sold in the morning subject to this producers' price quotation on a specific grade of goods. No representative of the shipper is present to check prices and the system has possible in it about all the abuses incident to selling by commission.

Under the auction system, goods are sold at public auction in the presence, not only of a number of buyers, but also of agents of the producers as well, and under other conditions that make for a fair, open market. Samples are shown in the auction room and the goods are in the near-by cars or warehouses for inspection. The auction system is adopted almost exclusively by the citrus fruit trade. The fruits are sold by auction at a cost of not over 3 to 4 per cent., including deliveries. Each citrus fruit association has its agents in each large city. A similar auction system is in use in the terminals of the Erie Railroad at Buffalo and at the New York Central piers in New York. The cost of selling in Buffalo does not exceed over 3 per cent. The great advantage of this method of selling is its publicity. Agents of the seller can attend and check both price and quality. The auctioneers of such places should be licensed by the government and be under civic control. The extension of this method of selling goods will unquestionably make for more stable and better prices alike to producer and consumer. To further such open markets and to save losses through deterioration, a terminal market in each city of any size is absolutely necessary. The place and function of the terminal market are discussed more fully in the chapter on Municipal Markets.

The third means for abating commission abuses is state administrative supervision and regulation. In order to assure just treatment to all, many of the states have already taken over a goodly number of functions formerly exercised solely by produce and grain exchanges. Thus in Illinois the Railroad and Warehouse Commission prescribes the rules for grain inspection, the rules and regulations as to warehouses, for hay and straw inspection, for weighing grains, for the regulation of terminal elevators, etc. Minnesota, also, through its Railroad and Warehouse Commission, has undertaken a similar supervision of the primary markets of that state. In Kansas there is a State Grain and Inspection Department which lays down the laws, rules and regulations governing the inspection and weighing of grain. In numerous states the guiding regulations as to warehouses and warehouse receipts, etc., are fully covered in the statutes.

The tendency of the present time is to extend state control over the activities of the grain pit itself with particular reference to prohibiting the abuses arising out of sales of "futures," and in a special effort to prevent any monopolistic control in the price-making pits. We have not yet given to these price-making pits the social thought that is warranted by their functions and powers of abuse. As has been pointed out by Willet M. Hays, formerly Assistant Secretary of Agriculture, certain mischievous factors arise which "prevent the free action of the law of supply and demand, and the trading pit becomes an agency interfering with what would be the natural course of events in the commercial world."

Another type of administrative regulation and supervision are the provisions now being generally adopted by the states of the Union regulating the commission and jobbing business, with the sole purpose of eliminating the abuses that have been all too prevalent therein.

The laws that have been passed on this subject include the following provisions, all of which have been in use for a sufficient time in one or more of the states of the Union to test their worth. They are, therefore, in every sense of the word "practical"—practical because they have worked, and practical because they get results. These provisions are:

1. Specific definitions as to embezzlement and fraud with definite punishments therefor.

2. A provision that all persons, firms and corporations engaged in selling agricultural produce on commission should take out a license from the Secretary of Agriculture or some other specific state official.

3. A stipulation that each of these persons, firms or corporations so licensed should file a bond for a stated sum conditioned upon the payment of all moneys owing to farmers who have consigned agricultural produce to them.

4. Provisions prescribing the forms for the books to be kept by such commission merchants, and requiring these books to be open for inspection both by the shipper and by a particular state official, such as the Secretary of Agriculture, or his duly authorized agent.

5. Provisions requiring detailed reports to be submitted to farmers and to the Secretary of Agriculture covering the condition in which the produce was received, the state of the market, price received, etc.

6. An informal and inexpensive means by which the farmer can investigate any complaints as to service or prices and secure redress when neglect or fraud seems evident.

In the development of statutory regulation of the commission merchant, the first step was to provide heavy penalties for the embezzlement of farm products by commission merchants. To be sure, no specific statute is

needed in order to make such embezzlement a crime, but statutes specifically defining this particular type of embezzlement, and fixing specific penalties therefor, make prosecution easier and the punishment to be affixed heavier and more definite.

Thus many of the states define embezzlement of this kind as "selling, or in any way disposing of, or applying, or converting, for one's own use, with intent to defraud, any bill of lading, custom house permit, or warehouse receipt intrusted to or in the possession of a commission merchant, or any property intrusted to or consigned" to the commission merchant. The penalties for such embezzlement are variously fixed as imprisonment for from one to five years and a fine of from \$100 to \$500.¹

But it was soon found that the statutes to be effective had to do much more than simply define such acts as embezzlement and fix specific penalties therefor. The farmer himself reaps no returns on conviction for em-

¹In Indiana the penalty is imprisonment in the state prison of from one to five years; a fine of not more than \$100; and disfranchisement and incapacity to hold any office of trust or profit for any determinate period. In Virginia, the offender is deemed guilty of larceny. In Massachusetts, the penalty is a fine of not over \$5,000 and imprisonment for not over five years. In Idaho the embezzler is liable to person injured in double value of property converted. In Illinois the penalty is a fine not exceeding \$1,000 or imprisonment in county jail for not over one year, or both, and the embezzler is liable to the person injured in double value of the property or amount of money so converted. In Nebraska the punishment is that provided by law for feloniously stealing property of the value of article embezzled. Missouri makes such an act a misdemeanor punishable by a fine of from \$100 to \$1,000 or imprisonment. Ohio makes it a penitentiary offense with confinement in prison for not less than two or more than four years. In Oregon, the convicted party may be imprisoned in the county jail for from three months to a year, or be fined from \$50 to \$1,000. In the District of Columbia the term of imprisonment may be as long as ten years.

bezzlement, especially, as so often happens, if the middleman in question has no property upon which civil damages can be levied. Our states, therefore, are rapidly extending their statutes so as to give to the state continuous administrative control over the commission business and to give to the farmer an easy and inexpensive means of seeking redress. The following paragraphs will set forth the method by which this can be accomplished.

Requiring the commission merchant to take out a license tends to make him transact business legitimately, as violations of the prescribed regulations mean revocation of the license. Chief among the states requiring such licenses are Virginia, and, for cities of over 50,000, Illinois. In Illinois the license costs \$25.00. Transacting business without securing such a license is punishable by a fine of from \$50 to \$200. In Virginia the license fee is \$50, save when commissions exceed \$1,000, when the fee is \$60, and \$10 for each thousand in excess of \$2,000.

To make sure that the commission merchant may not abscond from the state and leave no property behind upon which farmers may levy for goods sent him or money due from him, many states require every commission merchant, before he can legally engage in business in the state, to file a bond of from \$2,000 to \$20,000. Thus Texas requires that the applicant give a bond in the sum of \$2,000. The carrying on of such a business without filing this bond is subject to a fine of from \$100 to \$1,000.

Many states prescribe both a bond and a license as prerequisites for carrying on the business of commission merchant. Thus Washington requires a bond of \$3,000, and a license from the Commissioner of Horticulture.¹

¹ West Virginia provides for a bond of \$1,000 and a license. Nebraska prescribes a bond of \$2,000 and a license from the

The Washington statute offers model provisions as to the forms of books requiring that every commission merchant shall keep an accurate and complete set of books, containing a record of the amount and character of every consignment received, date of receipt, name of consignor, condition of shipment when received, and when same or any part is sold, name of person to whom sold, amount, date of sale, etc. Similar provisions for record keeping are found in Ohio and Illinois. (In Ohio, the books are open at all times, upon request of any consignor or his duly authorized agent.) It will be noticed that the forms prescribed require such accounts as any fairly efficient firm or merchant ought to keep. The keeping of accounts in prescribed forms not only makes for uniformity but also provides a reliable record in case of suits or questions. All of our railways—state and interstate—and most of our telephone, gas, street railway, water and other public utilities, are now required to keep uniform accounts open to the scrutiny of specified government officials. Our long history in this field has proved that such regulations are of value not only to the public, but to the companies as well. Only by this method can both get the information needed for sane and well-considered action.

The requirement that itemized statements be sent to

Food, Dairy and Drug Commissioner. In North Dakota a bond of not less than \$20,000, approved by the Board of Railroad Commissioners, and a license secured from the aforementioned Board are required. In Minnesota a bond of \$4,000 is demanded if the license authorizes the sale of grain, and the Railroad and Warehouse Commission may increase the bond if deemed necessary, whether or not grain is sold. A special license must be taken out if grain is to be handled. The fee for securing a license is \$2. These states prescribe heavy penalties; usually fines of from \$100 to \$1,000, for attempting to do business without such bonds and license.

all consignors as to place and time of sale, price received, etc., minimizes the possibility of embezzling money properly due the farmer, and gives the farmer some check on the reliability of the returns sent him. At the same time, it makes him realize the importance of better standardization and packing of his own produce if he is to get fair prices. The Washington provision regarding this point is worthy of consideration. It provides that if the produce is received in a damaged condition, or is unfit for sale, or if the markets are overstocked, the commission merchant must notify the Commissioner of Horticulture or the county fruit inspector and get from him a certificate that such produce is not salable and that it is necessary to destroy it. This certificate is made out in duplicate, one copy being sent to the consignor. Such detailed statements are of inestimable value to the farmer.

Through a continuous control over the commission business, the state can offer to the farmer an inexpensive yet efficient means of seeking redress. Thus in Washington, a shipper may appeal to the county fruit inspector or the Commissioner of Horticulture and this state official is then authorized to investigate thoroughly into the farmer's complaint. This means but slight expense, nothing more indeed than a 'phone message or a letter to the state official, and yet it gives a simple and effective method for checking up results. To be sure, the more serious cases pertaining to embezzlement or shortage of accounts would have to go before the courts, but it would usually be found that inquiry by the state official would secure adjustment to the satisfaction of farmer and commission merchant alike. Many of our state public service commissions have a splendid history in this respect. Though informal complaints have come in to them by the hundreds, they have usually been solved quite to the satis-

faction of the person making the complaint and the company as well.

Such have been the most successful of the methods for regulating the commission business that have thus far been adopted. And what have been their results? Stability in trade; better standards in grading and sorting goods, for under regulation the farmer does not have to engage in sharp practices in order to break even; the doing away with dissatisfaction with the middleman as such. In Washington, in Minnesota, in Texas and in other states that might be mentioned, the commission merchants have come to agree that the laws are beneficial to wholesome, reliable trading. And, finally, in stable trade conditions lie the possibilities for lower living costs to the urban dweller.

The producer can be given a steady market for his produce, the cities can be given maximum variety of foodstuffs, and distribution costs, and hence consumers' prices, can ultimately be materially lowered by the adoption of these methods of eliminating the abuses now incident to fixing wholesale prices. The forces fixing wholesale prices can then act freely to secure both stability in prices and fluidity in the distribution of the food supply.

CHAPTER VII

CONTROLLABLE ELEMENTS IN RETAIL PRICES

As discussed in detail in the chapter on The Cost of Food Distribution, a relatively large amount of food costs goes to the retailer in costs and profits. Of prime importance, therefore, is a study of retailers' costs and practices in order to ascertain what costs are added, and how unnecessary costs may, if possible, be eliminated or reduced.

The situation as to food retailers in the twentieth century city can well be illustrated by the types and number of retail grocery stores in Philadelphia. In that city in 1913 there were six companies operating a total of 490 "chain" stores: The Acme Tea Company had 201; Robinson & Crawford, 100; The Butler Company, 51; The Mecca Market Company, 24; the James Bell Company, 73; and George M. Dunlap, 41. Then there were 700 retail grocers who were members of the Retail Grocers' Association and who bought collectively, as largely as possible, through a wholesale corporation known as the Girard Grocery Company. In addition to these two main groups, there were 4,169 smaller "independent" corner grocers. To this number of small grocers should also be added 2,000 butchers and meat dealers, at least 200 of whom also carried groceries as a side line. There were also 258 delicatessen stores and 1,923 variety stores, a large number of which carried a greater or less amount of foodstuffs. This makes a total of 9,540 retail stores engaged in the distribution of foodstuffs in Philadelphia;

or, including service to some of the outlying territory, an average of about 1 to each 135 of the population.

Grouping these, it will be seen that there are 490 chain stores controlled by six companies; 700 smaller retail stores, coöperating through, if not largely controlled by, a central association; and 8,350 small "independent" stores. Comparing the three groups, we find that 5 per cent. are chain stores, 7 per cent. are members of the Retail Grocers' Association and 88 per cent. are small, independent, corner grocers.

Whether the upward limit of retail prices is fixed by the two first-named groups, because they sell in larger quantities and are represented in all the various sections of the city and thus can set standards that the unassociated retailer cannot set, or whether the upward limit is fixed by a subsistence wage on the part of these small, independent stores, is a mooted question and one that cannot be settled arbitrarily. There is no doubt, however, that minimum prices to the consumer are fixed by the cost of keeping up the average small, inefficient store throughout the city. Many of the owners of these stores in Philadelphia, and, as the report of the New York Investigating Commission shows, many of these stores in New York City as well, are merely making wages. Many of them each year go into bankruptcy.

It seems equally clear, too, that the chain stores and the associated retail stores, as well as the largest of the independent stores, are making goodly profits. As a rule, it appears, from the evidence everywhere, that these classes of stores are keeping prices up to the level fixed by subsistence returns to the small storekeeper. No student of the problem feels, for instance, that the "chain" stores are charging a "just" price in the sense that they charge the lowest price that would give them a reasonable profit. But for the chain stores to lower their

prices further would mean the driving-out of the small, independent store. This they could unquestionably do, because of the economies incident to the chain store method of retailing foodstuffs. It is estimated that 200 great food stores for New York City could make a profit over the existing 20,000 small stores of \$60,000,000 annually.

The chain stores became a vital factor in Philadelphia about 1895. Their success has been due, first, to their cash sales; second, to their elimination of losses through bad debts and the resultant quick turnover of capital—in order to keep his customers the corner groceryman feels forced to give credit and hence has heavy losses through bad debts; third, their ability to purchase their goods in large quantities direct from the jobber, manufacturer or producer—most chain stores are buying directly, and, having their own storage facilities, can do so with great savings; fourth, economies in distribution within the city—located in all sections of the city, deliveries can be made largely by the pushcart, while the heavier deliveries from terminal to supply houses and from the central store to the branches, can be made with heavy motor trucks, hence these savings are of no small significance; fifth, economies in central management and through central employing and purchasing agencies. It seems clear that through these economies and savings the chain stores can conduct their business at a cost of at least 20 to 25 per cent. less than can the unassociated retailer. These profits thus far have gone largely into advertising, into multiplying stores and into increasing invested capital rather than into lower retail prices.

Lower retail costs for the future will necessitate either the driving out of the small groceryman, through the lower prices of the chain and larger retail stores, or the securing to the corner groceryman, by municipal, state

and local action, the economies and savings now enjoyed by the centrally managed concern. If the former is done and our food supply placed in the hands of a few concerns which could easily make agreements as to prices, there would then have to be price regulation by an industrial commission.

Before discussing this and other methods for controlling prices, and for lowering the costs incident and necessary to retailing foodstuffs, it will be well to get at some of the costs which consumers are now paying and which are in no sense legitimate or necessary. The abuses and practices by which retailers are now adding an undue and improper toll, both upon the honest retailer and the consumer, may be classified as:

1. Dishonest weights and measures.
2. Adulteration and deterioration of foods.
3. Misbranding and misrepresentation.
4. Forestalling, regrating and higher prices on necessities.
5. Price agreements and monopolies.

One method of raising prices while apparently keeping them constant or the same as those asked by competitors is to sell commodities at under-weight or to measure and pack falsely. In this class of abuses is the custom practiced by some poultry jobbers of feeding poultry a mixture of sand and stale bread in order to increase their weight; and the measuring of articles sold by dry measure in liquid measures—a difference of 9.45 cubic inches in each quart measure.

The Bureau of Municipal Research in Philadelphia, by testing weights and measures in that city, found that only one out of fifteen tests of coal showed a full legal ton of 2,240 pounds, that forty-six out of fifty tests for groceries and 150 out of 200 tests of dry goods were short in measure. Mr. William L. Waldron, Superin-

tendent of the New Jersey State Department of Weights and Measures, in a recently issued pamphlet, points out 102 different means by which dealers give short weights and measures. The Department of Weights and Measures of New York State found in its first preliminary investigation that but 53 per cent. of the scales, 48 per cent. of weights and 48 per cent. of measures were correct; now, as a result of the work of this Department, 84 per cent. of the weights and 83 per cent. of the measures are found to be correct.

These practices gain acceleration through use. Each retailer is under pressure to keep up his profits by adopting the methods of his less conscientious competitor. The very nature of these abuses, therefore, necessitates governmental action in order to eliminate or reduce them. For the protection both of the reliable dealer and the consumer honest competition must be enforced.

The place to begin is, no doubt, with the producer. He must be made to see the advisability of packing and sorting honestly. The place to end, no doubt, is with the consumer. He must be taught to buy with intelligence and in such a way as to minimize the temptation to deceive: for example, to buy groceries, meats, vegetables, etc., by the measure or numerically, not by the amount he wishes to spend; that is, a "peck of potatoes," not "thirty cents' worth," "ten pounds of sugar," not "fifty cents' worth." But to guard food products on their way from producer to consumer there still remains the necessity for (1) virile bureaus of weights and measures in each city of any size; (2) a state bureau for the protection of dealers and consumers in the smaller cities and to enforce honest standards on goods sent in interstate trade; and (3) a national law and bureau for the protection of articles sent in interstate trade.

Pittsburgh's local Bureau of Weights and Measures claims to have saved to consumers at least \$1,575,000 during the first year of operation. The New York and the New Jersey state bureaus have also saved large amounts to consumers. The New York bureau estimates that it has saved to the people of the state a total of \$15,000,000.

Suggestive of other savings and other fields for governmental activities is the recently enacted national law (approved March 3, 1913) requiring manufacturers to print the net weight, measure or numerical count of the contents of all packages put into interstate trade. New York, North Dakota and Nebraska also have statutes requiring net contents to be shown on all containers. The New Jersey Department of Weights and Measures requires the net contents to be stated on all milk bottles; to facilitate inspection, each dealer in milk is given a number which must appear on his bottle. There is special need for requiring the net weight to be stated on brand goods. Many cereals were first put up in two-pound packages to be retailed at ten cents; after sales were assured, the contents were reduced to twenty ounces but still sold at ten cents. A 16-ounce package of Lion Brand Wool costs \$1.50; a 14-ounce package of Pansy Brand Wool costs the same. By knowing the net weight the purchaser can save $12\frac{1}{2}$ per cent.—goodly interest certainly.

By proper civic action, the heavy costs now paid by consumers through dishonest weights and measures can be reduced to a minimum and food costs thereby materially lowered. It should be noted here that, in addition to lowering living costs, such statutes will win further confidence in standardized and brand products and hence accelerate the tendency toward direct selling discussed in the succeeding chapter. Thus the national

law (approved August 3, 1912) establishing a standard barrel and a standard grade for apples when packed in barrels has encouraged direct shipments and has eliminated much needless risk, re-sorting and repacking.

A second class of temptations to which the retailing world is heir, and to which all too many succumb, is that of adulterating foods, substituting one quality for another, and using like methods for selling goods of lowered if not harmful food value. To be sure, here, too, responsibility also rests upon the producer and the manufacturer. The responsibility on the consumer, however, is less than with dishonest weights and measures, for it is quite beyond the power of the purchaser to ferret out the larger percentage of food adulteration. Thus during a single year the Pure Food Bureau in the United States Department of Agriculture uprooted more than two hundred ways of cheating the public through food adulteration and deterioration. The cost of administering the national food and drugs acts and the divisions and bureaus pertaining thereto is approximately \$700,000 per annum. The expenditures for this purpose in the various states differ greatly, ranging from \$7,000 (estimated) in New Hampshire, with a population of 430,572, to \$92,967.47 in Illinois, with a population of 5,638,591.¹ In addition to these state outlays, many cities expend large amounts in enforcing their pure food laws.² The states and the national governments alone

¹ Some other state expenditures worthy of note are: Minnesota (1912), \$62,728.71; Iowa (1913), \$53,698.08; Virginia (1913), \$43,030.96; California (1913-14), \$24,941.43; New Jersey (1914 appropriation), \$24,000; Missouri (1913), \$20,727.82; Connecticut (1912), \$20,250.45; Texas (1914 appropriation), \$14,600.

² Following are some city expenditures: Newark (1913), \$16,467.58; Oakland, Cal. (1913), \$27,695.36; Philadelphia (1913), \$26,648.64; San Francisco (1913-14), \$46,196.44; Toledo, Ohio (1914), \$7,325.00; Topeka, Kansas (1914), \$4,440.

are now spending \$1,100,000 annually to stay the hand of greed from polluting and harmfully adulterating the nation's food supply. Adequate protection to the consumer means constant and virile enforcement of city, state and national pure food laws and the hearty coöperation of city, state and national pure food bureaus.

The activities of health and pure food bureaus, be they city, state or national, must be not only restrictive but increasingly constructive as well. Consumers must be taught the deleterious effects of adulterated foods, candies and drugs; while the manufacturers and producers must be shown how to preserve their foods by economic but harmless methods. One illustration is pertinent. The acid in string beans, by action upon the tin in which these vegetables are canned, gives to the beans a pleasing, uniform, light green color, but unhappily makes them unwholesome for food. To eliminate this unwholesomeness the United States Department of Agriculture prevailed upon several leading canneries to use a tin can so coated on the inside as to be impervious to the action of the acid. The result was a string bean wholesome for food but spotted and unsightly in appearance. These unsightly though wholesome beans the housewife refused to buy and insisted upon the pretty green, poisoned beans. The business interests of these canneries at once suffered heavily. Here was a place where nothing but a nation-wide, educational, constructive campaign would suffice. Similar constructive activities must be assumed by all food and health bureaus.

Quite akin to the adulteration and deterioration of foods is misbranding or misrepresentation of quantity or quality. These subjects have usually been covered by the same statutes that aim at adulteration and de-

terioration. The national law declares "all *drugs* or articles of *food*, or articles which enter into the composition of food" to be misbranded if the package or label bears "any statement, design, or device regarding such article, or the ingredients or substances contained therein, which shall be false or misleading in any particular, and . . . any food or drug product which is falsely branded as to the State, Territory, or country in which it is manufactured or produced."

There is need for the extension of this national law to include fabrics and similar goods. Happily the present administration has interpreted the national pure food law to include the misbranding and adulteration of all meats or meat products in interstate or foreign commerce. These meat products were formerly held to be under national inspection before shipment only and not after they had left the federally inspected establishment. Now it is a criminal act to put into interstate commerce any adulterated or misbranded meats. Meats so misbranded or adulterated can be seized at any time before they become technically intrastate goods.

While the national law prevents much misbranding as to the contents or weight of a food package, it is still possible to put either a fifty-cent or a fifteen-cent label on exactly the same quality of any package goods.

One glaring type of misrepresentation during recent years has been the sale of storage goods as fresh. Here again responsibility must first be placed upon the purchaser, for the chief cause of this particular kind of misrepresentation is the deep-seated belief on the part of housewives that cold storage goods are not as wholesome as fresh. This is another field for constructive work on the part of pure food and health bureaus. The housewife must come to see that the probabilities are that the cold storage variety is more wholesome than the

fresh. Butter is as wholesome at the end as at the beginning of a year's storage. There is greater deterioration in an egg brought in on a warm day from a farm a few miles out than in a properly collected, chilled and stored egg held from six to nine months. The Housewives' League of Philadelphia performed a service of greatest public value in teaching the housewives the value and wholesomeness of cold storage eggs and the extent to which cold storage goods have been sold as fresh. Dr. Mary E. Pennington, of the Federal Research Laboratory, has done yeoman service in teaching the value of cold storage, and in showing the relative wholesomeness of cold storage goods.

There is clear need for a statute requiring cold storage goods to be clearly marked as such. Misrepresentations not only deceive the consumer and induce him to pay unnecessarily high prices for his food, but are unfair to the farmer and retailer who are selling bona fide fresh goods. Moreover, such legislation will lead to sounder practices in cold storage methods, to the end that such foods will not only be better preserved but more palatable. Palatability is a vital factor in food digestion and assimilation.

As there has been in recent years so much discussion as to the proper provisions for a cold storage law, there is given, in the appended footnote, a summary, both of the provisions of a model law on *marking* cold storage goods, and of the other provisions of a model cold storage law.¹

¹In 1911 the National Association of Food Officials appointed a committee to draw up a model cold storage law. On this committee were Mr. Harry Barnard, Chief Food Commissioner of Indiana, and Dr. Mary E. Pennington, the leading cold storage expert in the United States. The statute drawn up by this committee was adopted in Indiana and is, in every respect, a model law.

It is to be especially noted that this bill requires publicity as to the holdings in cold storage, thereby tending

The statute applies to all places "artificially cooled to a temperature of 40° F. or below," but not including "such a place in a private home, hotel or restaurant, or refrigerator cars." "Cold stored" is defined as "keeping 'articles of food' in 'cold storage' for a period exceeding thirty days." It further provides that the operators of cold storage warehouses shall obtain a license from the State Board of Health for conducting their business only after inspection has shown the warehouse to be in a sanitary condition. In case the warehouse becomes insanitary it is made the duty of the State Board to revoke the license. The bill provides that "an accurate record of the receipts and the withdrawals of the articles of food" shall be kept and that the State Board of Health "shall have free access to these records at any time," as well as free access to all such establishments. Each person, firm or corporation operating such a cold storage plant must submit to the State Board of Health at least a quarterly report "setting forth in itemized particulars the quantity of products held in cold storage." More frequent reports can be required by the State Board at will. All articles of food intended for human consumption must be prepared for storage in accordance with the pure food and sanitary laws and with the rules and regulations of the State Board of Health. Foods not intended for human consumption must be marked in such a way as to indicate clearly that fact. All articles of food when deposited must have marked clearly on the container the date when they are deposited in cold storage and, when removed, the date of removal. The limit for cold storage is placed at twelve months, save by special permission from the State Board of Health. The reason for granting this special permission must be stated in the Board's annual report. As goods deteriorate irretrievably when once taken from cold storage, it is made unlawful "to return to cold storage any article of food that has once been released from such a storage and placed on the market for sale to the consumers." It is especially made "unlawful to sell, or to offer or expose for sale, uncooked articles of food which have been held in cold storage without notifying persons purchasing, or intending to purchase, the same that they have been so kept by the display of a sign marked 'Cold Storage Goods Sold Here,' and it shall be unlawful to represent or ad-

to prevent monopolistic control and to make prices more stable by giving the purchasing public information as to the quantities of each class of food still in reserve. Worthy of equal note is the fact that the time limit is twelve months. Some recent statutes have mistakenly attempted to place a short arbitrary time limit for cold storage. And, finally, it is to be noted that the dealer must put a placard on all cold storage goods.

The fourth class of practices by which retailers too often add improper tolls upon food costs is forestalling, regrating and placing maximum prices on food necessities. Forestalling and regrating have long been known and punishable by the common law. The common law defines forestalling as "the buying or contracting any merchandise or victual coming on the way to market, or dissuading persons from bringing their goods or provisions there, as making the market dearer to the fair trader"; violators are liable to both fine and imprisonment. The old English law defines "regrating" (5 and 6 Ed. I Ch. 14) as "the buying of corn or other dead victual in any market and selling it again in the same market, or within four miles of the place." A more modern type of such abuses is the destruction of perishable food products in preference to selling them at lower prices. This is a practice all too common among the retailers of perishable goods. A price is fixed that will bring in maximum returns and goods are allowed to perish or are destroyed rather than sold at a lower though profit-returning price. Instances have been amply verified where apples have been bought up and the grower told to leave them at a certain place, where they have been vertise as fresh, articles of food which have been held in cold storage." Heavy fines and goodly terms of imprisonment await the violators of the act.

left to decay unmoved. The burning of cotton and the attempt of the Brazilian government to force up coffee prices by buying up great quantities of coffee, are recent examples of such abuses on a larger scale.

Another sales practice is to raise prices on certain necessities of life, such as eggs, poultry and butter, in order to recuperate from the lower profits incident to selling standard brand goods. Brand goods are well advertised and the consumer knows not only their quality but also their price. The retailer, unable to advance prices on these goods, is sorely tempted to recuperate profits by bolstering up prices on other articles, such as butter and eggs, which people must buy.

The retailer, especially, is open to serious temptation to increase his returns through the means above indicated, for his expenses are necessarily large. His advertising expenses are growing. Goods must be done up in neat packages and carefully wrapped. Solicitors must come to the door to learn what groceries are wanted. Deliveries must be made, often totaling one-half the expense of the article and adding from 15 per cent. to 20 per cent. to the retail price.¹ These expenses mean that the city

¹ Some idea of the percentage of sales that goes to rent, to insurance and taxes, and to wages in various retail businesses will be gleaned from the following table:¹

Business	Per Cent. of Sales to Rent	Per cent. to Insurance and Taxes	Per cent. to Wages
Vehicle or implement stores.....	2.12	1.04	9.41
Grocery stores.....	2.07	.58	7.96
Jewelry stores.....	3.98	1.32	....
Drug stores.....	4.02	1.21	....
Furniture stores.....	3.44	1.57	8.73
Variety stores.....	4.41	.98	8.86
Department stores.....	3.91	1.01	....

¹ See *System*, January, 1914, pp. 19, 20, 24.

must take constructive measures to lower freight and cartage costs to the retailer and to give him other facilities essential to his work. Simply because expenses are large is no justification for their being taken from the consumer in ways surreptitious and by means more or less harmful in their effects.

The fifth abuse by retailers is the making of price agreements and the attempt, too often successful, to secure monopoly prices by written agreements or by mutual understandings. Philadelphia retailers have several times attempted to set the price on certain articles by agreement. More than once it has been clearly shown in the New York courts that the milk dealers in New York City were agreeing upon the price to be charged for all milk sold within the city. The Attorney-General of the State of New York investigated the milk business of New York City late in the year 1909 to ascertain whether or not there was in existence a combination among milk dealers to restrain trade. He found that there was a milk exchange which fixed the price on practically all milk going to New York City. "The result is that the producer is compelled to sell his milk to one of these large companies at a price arbitrarily fixed by them, and published by them six months in advance, or to the exchange, an organization of New York City dealers, at a price arbitrarily fixed by them. The only other recourse remaining to the producer is to ship his milk to unknown, and oftentimes irresponsible, dealers." As has been pointed out previously, it is entirely possible for the chain stores now to set the standard of prices within any large city, and certainly it is easy for the retailers in the smaller city to combine upon a given price.

Of special significance in recent years has been the rapidly increasing tendency for manufacturers to set the

prices at which their own goods are to be retailed. A score or more years ago the manufacturer paid little or no heed to the prices at which his goods were to be sold. With the phenomenal development in advertising, and in the various other means of reaching the purchaser, however, the manufacturer began to solicit nation-wide trade and to increase profits by making a "standard" article, sold everywhere at the same "standard" price. These price agreements are not legal, under the Sherman Act, even though the articles are patented. "This package of ———," so runs a typical agreement by which the manufacturer seeks to set the retail price under the guise of protecting his patent, "is licensed by us for sale at a price not less than fifty cents. Any sale in violation of this condition when so sold will constitute an infringement of our patent No. — and manufacturers and all persons so selling or using the package or contents will be liable to this condition. A purchase is an acceptance of this condition." Oftentimes the retailer must also agree not to sell any other brand of goods of the same kind. Candy manufacturers set retail prices by slipping a card in the package setting forth the price at which the package *can* be sold. As costs vary in producing such standard goods, the price often remains steadfast while the weight or content of the package changes.

But fixing prices by manufacturers' agreements under the patent laws has recently been held (May 26, 1913) by the United States Supreme Court to be illegal. This decision holds that the ownership of a grant of patent does not give to the patentee the right to impose upon the purchaser of his goods any obligation, after such purchase has been made, to sell goods only at the price named by the patentee. The patentee's right to fix prices is limited to his first sale. Price agreements in the future will, under this decision, until other statutes are passed

or decisions made, have to be by such means as the inclosing of a card as noted above or "the education" of the consumer.

Many feel that this decision of the Supreme Court is not in the best interests of the consumer. They point out that price-cutting is most effectual as an advertising medium on goods of a known price and value and that, therefore, the better known the goods, and hence probably the better the goods, the greater the abuse of the price-cutting practices by stores that wish to draw trade. They point to the fact that such price-cutting is prohibited by certain recent statutes. Thus New Jersey in April, 1913, passed a law forbidding "for the purpose of attracting trade the appropriation of brands, names, reputation or goodwill, by deprecating the value of such products in the public mind, or by misrepresentation as to value or quality, or by price inducement." In June, 1912, Denmark passed a law fining those "who sell or offer for sale goods in original wrappers from producers or jobbers, upon which their fixed price for the retail trade has been indicated at a lower price" (except damaged goods, removal or retiring from business) "save by permission of maker or jobber."

It is difficult to see, however, how there can be any control over the upward limit of consumers' prices if the manufacturer is allowed to set his own price, or, in other words, limit the amount of profit that each retailer must make regardless of his individual costs. Such price agreements would often be inimical to the best interests of the retailer and the consumer. Certainly if the manufacturer or producer is to be allowed to set his own price, then there must be created an industrial commission with full powers to approve such prices as are reasonable and with other powers similar to those given to public service commissions over quasi-public utilities.

The abuses above indicated are of sufficient seriousness to warrant not only the corrective measures and activities indicated above but certain constructive activities as well. They are deep-seated in the very nature of the business. To more completely eradicate them and to make the way for lower food costs, means and plans other than those above considered are worthy of serious consideration. These are:

1. Consumers' coöperation. This will not only give a reliable avenue for distribution, but will also give to consumers everywhere reliable information as to what retail prices can reasonably be. This subject is further discussed in the chapter on What Consumers' Coöperation Has Accomplished.

2. Producers' coöperation. The effectiveness of this method in getting better prices to producers, in standardizing packages, in lowering food costs by more direct sales, and in getting better produce to consumers, is discussed in Chapter XI.

3. A shorter route from producer to consumer whereby there may be lower cost to retailers as well as to consumers. To this subject the following chapter is devoted.

4. Municipal markets and other means of direct marketing. Chapter X discusses in full this agency for bringing producer and consumer together and for securing competition under high standards of governmental and community inspection.

5. Other governmental and civic provisions. The chapter on A City Program for Lower Food Costs discusses still other governmental and civic steps that may be taken to lower food distribution costs, to eliminate deterioration and to give to retailers better service at lower prices and to consumers better goods at more reasonable prices.

In addition to these means there remain four to be discussed here: (1) public ownership and operation; (2) price regulation by an industrial commission; (3) publicity, and (4) the education of the purchaser.

Public ownership is urged by some as the only solution of the problem. It is held that through public ownership only can the motive for higher prices and the characteristic retailers' abuses be eliminated and in their stead be substituted a desire to serve for social approval. This scheme, however, is as yet little more than a wish, and that on the part of but few of our people. The cost of the venture alone puts it out of the question for the time being.

A second method is the creation of a price-fixing industrial commission with power, not only to prevent the abuses above described, but also to fix food prices. It is proposed that this commission be endowed with powers similar to those exercised by a public service commission over the rates and service of common carriers and municipal utilities.

Should the food retailing business of our cities be controlled in the future by a very few large companies, a price-fixing commission will not only be desirable but essential for the protection of the public. If present tendencies toward centralized control and price agreements by manufacturers and retailers continue, regulation by an industrial commission is only a matter of time.

But considerable time must elapse before our national and state governments will extend, if at all, social control over the maximum prices of foodstuffs, through such price-fixing commissions. In the meantime, however, steps can be taken and are now being taken whereby publicity commissions, thus far created in the name of market bureaus or industrial commissions, can give pub-

licity both as to wholesale prices and retail prices and thus wield almost as great powers as they could if endowed with compulsory powers. Public information of this character will be of inestimable value to both producer and consumer; it would prove a most wholesome deterrent to any retailer.

Of poignant supplementary power even after such commissions or bureaus are established and of inestimable value before they are established is the work of various leagues of housewives. As nine-tenths of the retail buying is done by women, such organizations have been and ever will be of inestimable social value if they do nothing more than they have done—make and keep the housewife conscious of her power. While human nature is human, the retailer cannot be the only source of information open to the housewife if she is to buy economically and reliably. The housewives' league will do yeoman service to every consumer if it but continues to cry out abuses and extortionate prices.

High retailing costs will continue as long as there is ignorant and careless purchasing. The final solution for the elimination of abuses must ever be careful and intelligent buying. The best laws, the most virile inspection, the most careful price-fixing can never reach their maximum usefulness until every housewife is a law expositor and price-fixer. The women of our great middle-class spend nine-tenths of the total family income. Why train men to produce if women are to ignorantly or carelessly waste what men earn? As the old proverb has it, many a day laborer's wife "throws more out the back door with a spoon than her husband can bring in the front door with a shovel."

Let one illustration suffice as to intelligent buying. Many housewives have demanded and still do demand wet-packed in preference to dry-packed poultry. As a

matter of fact, the latter is more wholesome and contains more nutrition than the former. In the routine of marketing wet-packed poultry, about three hundred pounds of soluble proteins and nitrogenous extractives for each carload of poultry go down the sewer, while the consumer pays chicken prices for 1,300 pounds of absorbed water. Facts such as these, driven forcefully home, can make out of us a different kind of a purchasing nation.

In our schools a place can be given to teaching food values. Salient facts as to food values are certainly as pertinent and as good mental discipline as are facts about Cæsar's legions. Buying efficiently and hence lower living costs can be furthered in no more direct way than by systematic instruction in food values, alike in our public schools and civic centers. In New York City, Mayor Mitchel's Food Supply Committee is doing a service of great suggestive value in disseminating pamphlets on such subjects as "How to Cook Fish" and "How to Use Left-overs."

The spending of nine out of every ten dollars of the family income is left to the untrained wife. In her helplessness she turns the job over to the grocer clerk and the counter girl. When she is an efficient purchaser the family income will not only be conserved but in effect increased.

CHAPTER VIII

A SHORTER ROUTE FROM PRODUCER TO CONSUMER

The same economic forces that have made toward stability in wholesale prices and a facile, equalized food supply throughout the entire country, are now also making for a shorter route from producer to consumer. For lowered food costs this is one of the most significant and hopeful tendencies of the twentieth century.

Until relatively recent years, the typical route taken by foodstuffs was indirect and costly. The farmer carted his products to the country merchant; the country merchant sold through a commission merchant; the food was freighted to the city terminal; then carted to this commission merchant's place of business; he in turn sold to speculators and jobbers, and the food was carted to their respective places; then carted to storage houses; then sold and carted to the retailer who delivered it to the consumer.

As contrasted with this roundabout and costly method, the present tendency is for farmers, middlemen and retailers alike to make their business units include all or at least several of the steps in distribution. Farmers are organizing in coöperative associations to sell as directly as possible; the commission merchant is turning jobber and sending his own agent or motor truck out into the country to buy direct for his own stores; the jobber at the primary market is buying directly from the country merchant and often indeed directly from the

large producer and then selling to the retailer; the retailer, typified by the chain stores, is extending his operations to include all the activities in distribution from the time the food product leaves the farm or garden until it reaches the consumer's table. A decade ago wholesale commission men were declaring that good "business" required that retailers buy from jobbers, jobbers from wholesalers, wholesalers from country merchants, and country merchants from farmers, and that any and all attempts to eliminate the middleman were destructive of all good business principles. This was the first symptom that foodstuffs were being routed more directly.

A typical example of this tendency toward direct buying is the growing method of marketing eggs through cash-buying jobbers. This method is given in detail in a pamphlet by Professor C. W. Thompson entitled "Technical Studies in Egg Marketing." Formerly the country merchant was compelled to sell solely through the commission merchant with great risk and with practically no opportunity to safeguard his sales and returns. With the improvements in transportation, his means of finding a stable market multiplied, the egg business became more secure, and cash-buying jobbers began to appear. These jobbers sent agents to country towns to buy not only eggs but poultry as well, and possibly also to sell to the village merchant fruits and similar foodstuffs. Once the village merchant could sell for cash, it did not take him long to transfer his business from the commission merchant to the jobber. The eggs purchased by the traveling agents of these jobbers or, as customers became confident, through mail quotations, were shipped to the jobbers' headquarters, and there candled, graded and sorted for the local retail trade or packed in carload lots for shipment to other markets or held in cold stor-

age for future sales. Large numbers of first-class eggs were sold directly to retailers, good hotels and restaurants, while "seconds" were sold to eating houses, inferior retail firms and bakeries. To the bakeries were sold the "cracks" and "checks."

The economic results of this direct method of sale as compared with the old roundabout method, which, unfortunately, still sets the standards for consumers' prices, are as follows: Under the direct method, Professor Thompson found that where the local farmer received 21 cents a dozen for his eggs, the cash buyer sold to Duluth retailers for 23 cents, the Duluth retailer paid the express charges, which approximated 1 cent a dozen, and sold to the consumer for 29 cents. This was an increase of consumers' over producers' prices of $33\frac{1}{3}$ per cent. Quite in contrast with this is the accumulation of charges on eggs sold under the old, more roundabout method. The New York Market Commission, starting with the hypothetical farmer's price of 20 cents, found the accumulation of charges to be as follows: The shipper's charges, including labor in collecting and packing eggs, and transportation charges to the city amounted to 2.3 cents per dozen; the commission for handling was 1 cent; the jobber's charges, including cartage from dock to store, candling, grading, storage and insurance, profit and delivery to the retailer, were 3.8 cents; the retailer's charges, including operating expenses of 10 per cent. and a profit of 5 per cent., increased the cost 4.2 cents, making the consumer pay 31.3 cents a dozen for the eggs for which the farmer received 20 cents, an increase of $56\frac{1}{2}$ per cent. The old indirect method cost 23 per cent. more than the direct method. Jobbers dealing in strawberries and other perishable fruits are using similar methods. Their professional buyers follow the season northward and are most potent factors in the wide and wise dis-

tribution of such produce. Such direct buying means greatly reduced food costs.

It must be noted here, for the sake of completeness, that there are still marketing conditions where the commission business tends to increase and jobbing to decrease. During a period of rising prices, jobbing is encouraged, as the jobber has the prospects of increasing profits through higher prices; but when the price is falling the jobber is constrained to hold back and either turn commission man himself or leave the field to established commission houses. On the whole, however, and increasingly as the risk diminishes and the market widens, the tendency, even for periods of falling prices, is for direct buying and selling.

Direct buying is growing in other fields. Agents of large merchants go to farmers on the Pacific Coast to buy fruit, to ranches in the Rocky Mountains for wool, to plantations in Louisiana and southeastern Texas for rice and to the orchards of Colorado and Oregon for apples and other fruits. The manufacturers of candies tend to sell through a single jobber to retailers. Thus the organizations associated with the National Confectioners' Association, representing a total investment of \$100,000,000, and having a total of 50,000 employees, sell in this way \$150,000,000 worth of candy yearly; to this the retailer adds in costs and profits 40 per cent. The manufacturers of brand goods and standard goods are likewise selling through only one jobber and often directly to the large and reliable retailer. In those fields where commission business still prevails, as in the livestock trade, it seems clearly established that lower commission charges are being made, though the greater amount of business and the smaller risks have increased rather than decreased maximum returns to commission men.

The large chain stores, the larger retail stores and combinations of smaller corner grocerymen are now buying direct to a rapidly increasing extent—either from the jobber, from the country merchant or, as is increasingly the case, from the producer himself. In several cities such retailers are even sending their own motor trucks out to gather foodstuffs direct from the growers or are buying and equipping their own steamers and gasoline barges to carry products from water-front farms. One concern through its motor line taps a region ninety miles away; another collects goods from all the farms about the city, and a third, a chain store, through its own boats, takes practically all the produce from a prosperous water-front agricultural section. Such direct buying has been the chief reason for the prosperity of the chain stores. Their agents are to be found in all parts of the country, buying directly and economically and shipping to the store's headquarters where the goods are prepared for the local market. The large retailers, in order to insure a steady supply at all seasons of the year, are going into the country and making yearly contracts with high-class producers to sell to them all their eggs. The price paid the farmer is sometimes placed at from two to five cents, and in rare instances ten cents, above the market price, and, therefore, varies with the different seasons of the year. Similar contracts are made with country stores, with creamery companies and with farmers' associations. In Philadelphia seven hundred grocerymen, the so-called Triangle Stores, have incorporated the Girard Grocery Company, through which they buy directly to as large an extent as possible.

Another twentieth century tendency that gives hope for lower food costs is the movement among food growers to organize into coöperative societies in order to get maximum prices, to eliminate abuses in sales and to in-

crease profits by selling as near to the consumer as possible. These organizations make it possible for jobbers who could not afford to buy from individual farmers, to still buy directly from the producer. Herein lies the most promising method for the elimination of the country merchant in food distribution. It is the long holding and the improper packing by these local middlemen that cause the greatest amount of food deterioration. The country merchant, in order to hold his trade, is tempted to continue the custom of buying his eggs by the count and not "loss off," that is, to candle and return to the farmer all bad eggs. This case count method of buying has tended to perpetuate carelessness on the part of the farmer, and has, therefore, made necessary the greater loss and unnecessarily high costs for regrading and packing. The more directly the farmer sells, the more attention he must pay to the quality and standard of his goods. Through coöperation producers can standardize their goods. Moreover, by selling for cash, the farmer is encouraged to buy his goods on a cash basis rather than to do a credit business with the local merchant with lowered costs to him. To these and other results to be attained through producers' coöperation, a special chapter is devoted.

Of like significance is the movement among consumers to band together in order to save by buying directly or by lowering costs through getting honest weights, full measures, and reliable goods at reliable prices. This movement and its social and economic effects are more fully discussed in the chapter on What Consumers' Cooperation Has Accomplished.

Still another method of shortening the route from producer to consumer is the encouragement of municipal markets and other means of direct marketing, as discussed in the succeeding chapter.

There are many other ways through which this tendency toward a more direct routing of foodstuffs can be given a greater impetus. The commission merchant and jobber, who persist in using methods inimical to the best interests of the reliable middleman as well as the producer and retailer, can be eliminated by the regulative laws discussed in Chapter VI. Publicity through housewives' and farmers' organizations will further tend to eliminate excessive charges and prevent abuses. But more to the point, city, state and national market bureaus can promulgate information so as to eliminate the risk in finding a market, thereby reducing costs to the middlemen themselves, and stimulating direct buying. Producers can sort more honestly and pack more reliably. Civic action can further the proper use of refrigeration and cold storage, encourage water transportation, perfect freight service, prevent monopolistic abuses, and take all other steps essential to reducing the cost of shipping and to minimizing the risks in buying and selling—in short, take all steps necessary to confident, reliable marketing. And finally, the city can establish terminal wholesale markets where goods are sold by licensed public auctioneers under conditions that will give producers and buyers everywhere confidence in that city as a market center. Goods will then be consigned more and more directly. All these steps ultimately mean a distinct lowering of food distribution costs to the great enhancement of commercial transactions and lower living costs.

A shorter route from producer to consumer is not to be desired for its own sake. The end to be attained is *lower distribution costs*. This fact cannot be reiterated too often. Neither is there any desire to eliminate middlemen just for the sake of eliminating middlemen. The end to be attained is *minimum costs consistent with efficiency*. If that end is attained by the existing number

of middlemen or even a greater number of middlemen, let us have them. If that end is reached by the elimination of the number of hands through which the majority of foodstuffs pass, then that elimination will be welcomed.

Society will take the same attitude toward middlemen as it has toward laborers when production can be lowered through machinery. The laborer has been left to seek other employment. So will the middleman. And just as "laborers" are needed now as much as formerly, though the number of the workers through which a product must pass for its completion has decreased, so "the middleman" will be with us always, though in diminished numbers working with a distribution process the risks and costs in which have been largely eliminated through individual, coöperative and governmental action.

CHAPTER IX

AGENCIES FOR BETTER LOCAL DISTRIBUTION

One of the weakest links in our distribution system is the inadequacy and inefficiency of existing agencies for local distribution.

The cost of getting goods from the farm to the shipping point is entirely too high. Slightly over one dollar in twenty of the entire wholesale value of farm products goes for this purpose. Consumers are paying many times over the eighty-five million dollars, and more, that our farmers are spending annually in marketing their output.

This exorbitant cost has a large number of baneful effects on producers' output and returns, and on the quality, variety and cost of consumers' goods. The farm owner "within three miles of market," says the Cornell Agricultural Survey, "makes about four times as large a labor income as that made by those who are over seven miles from market. It appears that one can pay 5 per cent. on the larger value per acre of the land near market, and yet make much more for his labor." Through better local marketing facilities, farmers' incomes can be increased.

The further the farmer is from the shipping point, the greater the deterioration of his perishable goods when they reach the market. The greater the distance, the less frequently the produce is taken into the market. An investigation in Kansas showed that farms from two to four miles from the market carried their produce to

market twice a week, while the farmers out eight miles marketed it but once in two weeks. There is, therefore, deterioration through holding for market as well as upon the way.

But of greater importance is the effect upon the character of the farmer's output. Farmers near the shipping point adapt their output to local markets. Their very nearness to market has the psychological effect of turning their attention to selling at home. The greater the amount of selling at home, the lower the costs of food distribution. It is just this selling at home that good local marketing facilities promote. This applies to grains and similar products as well as to perishable goods.

And, finally, a prime essential to nation-wide stability and fluidity in prices, and to an equalized food supply, is the lowering of initial marketing costs. The output of certain sections can never be available to all parts of the country and can never have its effect on nation-wide prices until this initial cost is eliminated.

It would be difficult indeed to overestimate the value and significance of less costly and more mobile agencies for local distribution. Through selling at home, distribution costs can be lowered. The twentieth century has brought us certain new agencies for local distribution that have extended the meaning of the words "at home" to include all markets within a radius of fifty or more miles from the farm. Many growers can now find an adequate outlet for their produce within such a radius.

For perishable freight, Los Angeles is now but 173 hours; Jacksonville, Florida, but 89 hours (1,140 miles), and New Orleans but 57 hours from Chicago; Washington, D. C., is but 12 hours from New York, 38 hours from Boston and 46 hours from Montreal. Fruit and vegetables grown in regions as far away as southern Florida can be delivered to consumers in Chicago and

New York within five days after gathering. It takes about the same time for produce gathered 25 miles out from Philadelphia to reach Philadelphia consumers. Moreover, long haul shipments have better refrigeration facilities. These significant facts point to the necessity for better agencies for local distribution if the local farmer is to compete successfully with the farmers of more distant sections.

The unit of quantity for steam shipment is, of course, a carload. Freight rates¹ for carloads are lower, time of transit shorter, risk of injury less, opportunity for securing better markets higher, probabilities of adequate returns vastly greater. But not all farmers can sell direct in carload lots, and the first problem is to secure to them the advantages of car lot shipments.

There are several plans by which this can be done. Many steam roads now conduct local "pick up" services. Small assignments are collected from a number of stations and brought to a given point to be combined into carloads. Some of the railroads also run special market trains in order to pick up relatively small quantities. For instance, a market car destined for Philadelphia leaves Columbia on Tuesdays and Fridays, stopping at most of the stations to pick up market produce, and gets into Philadelphia in time for the Wednesday and Saturday markets. A third plan is the professional forwarding agent, who combines enough small shipments des-

¹ "The rate on peaches from Fayetteville, Arkansas, to Omaha, Nebraska, was in November, 1912, 51 cents per 100 pounds, while on less-than-carload lots the rate was 99 cents per 100 pounds. At the same time the carload rate on celery from Sanford, Florida, to Boston, Massachusetts, was 41 cents per crate for carload lots and 51 cents for less-than-carload lots."—F. Andrews, "Carlot Markets and How They Are Supplied," November, 1913, *The Annals of the American Academy of Political and Social Science*.

tined to a given station to make a carload. The agent pays the railroad company at carload rates. When the car arrives at its destination the separate consignments are delivered to their respective consignees. Such agents have worked up a good business in Indiana, Michigan and Tennessee, handling small shipments almost as easily as full loads. This plan offers exceptional possibilities for savings in local shipments everywhere.

To the railroads is due much credit for the place which Pittsburgh occupies as third largest distributing center for fruits and vegetables in the United States. They make a special rate on country produce to all dealers in towns within 105 miles of the city. The receipts of country produce in 1912, exclusive of eggs and dairy products, were from 35,000 to 40,000 cars on the Pennsylvania lines alone.

The railroads have keenly recognized their dependence upon prosperous agricultural conditions for increased business and the profits resulting therefrom. Thus they have made organized efforts to bring more farmers to certain regions and to promote scientific agriculture through instruction trains. They also look to the supply of farm labor in certain sections and send experts to give advice as to marketing.

There are at hand, however, certain newer agencies for distributing farm produce that are mobile, cheap and effective for local distribution. These include trolley freight, water transportation, good roads, parcels post and motor trucks. These agencies tend to lower the cost of haul to the station. More significant still, they make it possible to ship in less-than-carload lots and, therefore, to handle the surplus of the average small farmer. And finally they make it possible to deliver goods immediately to the market or section of the city where needed.

To all interested in our local and interstate transporta-

tion systems, it is becoming increasingly apparent that trolley freight is to play an ever-larger part in developing local agricultural communities and in distributing farm produce to needy urban sections.

The features of trolley freight¹ that make its possibilities loom up so large are:

1. Frequent stops at small outlay, thus reducing the cost of farmer's haul to station.

2. Regions inadequately served by other carriers can be tapped, thus placing many farmers several hours nearer the city's markets.

3. The ability to ship in smaller quantities than do the railroads (which are essentially carload lot and wholesale distributors), thus giving a new avenue for marketing the surplus of small farmers and focusing attention upon the nature of the output of all farmers.

4. Farmers can market their goods in a fresher condition, thus giving the consumer better goods and the farmer better prices.

5. Sections of the city not reached by railroad terminals can be reached by trolley freight, thus making possible the distribution of food products to the needier sections of the large city and directly to the market center in the small city.

6. It increases the facilities for getting the output of manufacturing establishments to railroad stations, and from the city to outlying suburbs and farmers, thereby enhancing both urban and farm values.

7. It pays.

The use to which trolley lines are put as freight carriers may be classified as: (1) carrying farm produce to market, and miscellaneous manufactures and mer-

¹For a more complete discussion of the use and possibilities of Trolley Freight, see an article by the author in *The Aera* of June, 1913.

chandise to the country; (2) carrying carload lots as feeders of the steam railroads; (3) delivering parcels and lighter packages into and out of the large cities; (4) acting as a means of urban distribution.

The farm produce carried to market includes milk, butter, eggs, fruit, poultry, livestock and other farm products.¹

¹ The use of trolleys in getting farm produce to markets has been developed more generally in the Middle and Far West than it has as yet in the eastern states, despite the fact that the eastern states have greater mileage in interurban trolley lines. Examples of its use are found in the practices of certain middle western trolley companies and in the freight and express service in Boston.

Centering in Indianapolis, in the largest traction terminal in the world, are eleven electric lines radiating 2,000 miles of trackage from the extreme northern to the extreme southern part of the state, bringing in upward of 15,000 tons of freight per month. The major portion of this freight consists of foodstuffs. The city secures over 75 per cent. of its market supplies over these lines. A long distance telephone message at five in the morning brings fruit and vegetables from a radius of fifty miles. The result is a splendidly developed agricultural section, a better development in the manufacturing and commercial possibilities of Indianapolis and a lower food cost to the Indianapolis consumer. South Bend and Fort Wayne, Indiana; St. Louis, Missouri; cities in southern Illinois; Chicago; Columbus, Dayton, Toledo, Cincinnati and Cleveland in Ohio, are other cities already profiting by such traffic. In many of these cities are open municipal markets with the trolley lines running directly to them so that farmers may receive retail prices for their goods.

The second class of freight handled by trolley lines is the hauling of heavy freight by the carload as feeders of the steam railroads and as a means of getting produce in carload lots direct to the retailer. On the lines of the Illinois Traction system there are seven coal companies depending wholly upon that system for an outlet. These lines during the winter months carry an average of 1,000 cars of coal monthly. Manufacturing plants along the line of the Bay State Street Railway Company have asked for the construction of sidings so as to do away

Within and centering in cities of the United States are 40,088 miles of electric track, practically double that of a decade ago, operated by 1,279 companies owning 89,601 cars with an authorized stock and bond issue of nearly five billion dollars (\$4,708,568,141), and with over two billions (\$2,384,344,513) in outstanding stock. These tremendous resources can be turned with profit to local distribution. Several lines are now making from 12 to 25 per cent. of their gross receipts from their freight and express business. The gross earnings on all lines from such business increased from \$1,439,000 in 1902 to \$6,792,000 in 1907, an increase of 372 per cent. The revenues from trolley freight within New York City increased from \$4,032 in 1908 to \$278,354,000 in 1910. The amount of milk received by trolley in

with long and expensive hauls to steam road stations. An example of the use to which trolley freight has been put in the delivering of parcels and lighter packages into and out of the large cities is found in the class of service offered by the Ohio Electric Company. The merchants' freight service of this company is handled on passenger cars, equipped with baggage compartments. The rates are little higher than those for freight handled on the regular trolley freight car. The commodities offered for transportation in this way consist largely of ice cream, fruits, bread and merchandise. The trolley lines centering in Philadelphia also do a business of this character. The handling of freight within the city on traction lines is still in its infancy, as the trolley lines in some of our larger cities have heretofore been prohibited from doing a freight business, while in others the companies themselves have not paid special attention to the development of such traffic. The business of the Bay State Street Railway Company increased 165 per cent. for the month of November, 1912, over that of November, 1911, an increase to be explained almost entirely by the fact that the terminal facilities within the city were very greatly developed and the company was no longer obliged to make a transfer of goods from car to car or from car to automobile truck.

Philadelphia increased from 3,800,000 quarts in 1905 to 9,170,000 quarts in 1913. There is a similar increase in English tramways. This is indicative of the possibilities of moving freight by less than carload lots on trolley and tramway lines.

The development of trolley freight as a means of retail distribution would, first of all, add to the receipts of trolley companies. Where given a fair trial, under competent management, trolley freight has proved profitable. There is already a surplus current for the heavy passenger traffic of the day which can profitably be turned to freight business during other hours.

The development of trolley freight, moreover, would place the farmer many hours nearer the city with a consequent readjustment in the character of his output to local markets. The farmer in his efforts to increase his profits, the consumer, in his desire to get better food at lower prices, the manufacturer, in his efforts to get an outlet for his products, and the city that would be located in a wholesome agricultural environment, must all look toward an increased use of direct marketing and of selling at home. Trolley freight makes for just this kind of development.

The development of such transportation facilities will save time to farmers. For instance, an outlying farmer fifteen or twenty miles from Philadelphia will take a day to drive to the Philadelphia market, a day to sell his products, and a day to get home. Thus half his week is gone. With trolley freight he could load his goods on a trolley car at six in the evening, take an early train to the city the next morning, sell to the middlemen or direct to the consumers en route or at the market, and be back in the early afternoon, using but half a day instead of three, and keeping his invested capital at home at productive work. The output of the farm would conse-

quently be increased, and the farmer's purchasing power enlarged.

The development of trolley freight in many sections would mean that the gates of every farm would not only swing outward to send an increasing volume of products to the city consumer, but they would also swing inward to allow the entrance of goods made or sold in the near-by city. The result would be a closer interweaving of the agricultural, economic and social interests of country and city to the end that confidence would supplant distrust, and coöperation, indifference; thus both the city's position as an urban center and the value of the outlying farms would be enhanced.

More direct access to markets can also be secured through the development of water transportation, especially by the gasoline barge and truck boat. One crate of produce can be carried on a boat as quickly and efficiently as a carload. The freight rate by boat is often not much higher for a small than for a large consignment. Adequate development of the Mississippi valley waterway and the Atlantic intercoastal waterways should mean lower transportation costs. With the small truck boat and gasoline barge we may yet find that our old canals and waterways, once so highly prized, may have their value largely returned. The development of our city wharves, with the power in our cities to own and operate wharves and market piers, will all aid in getting water-front farmers nearer by many hours to the markets of the urban centers.

Of distinct significance in reducing hours to market by heavier loads and ease of shipment is the development of good inter-county roads. Good roads centering in good urban markets have instantly reflected their advantages in higher farm values. The "good roads" movement is of importance to every farmer. With no thought

of deprecating the building of good state roads, yet it is clear that relatively few farms can ever be on state roads. What is needed are good dirt roads with easy grades, connecting all local farms with their nearest market; not good automobile roads connecting cities with cities.

Related to the opportunities afforded by road development are the possibilities of sending farmers' produce into the city by parcels post. In Germany the extensive use of the parcels post has proved a poignant means of lowering living costs. The consul-general of the United States at Hamburg says: "The parcels post makes it possible for the farmer to visit the city once a year, where he solicits customers whom he supplies directly from the farm just as regularly as from the retail shop of the immediate neighborhood." The American consul at Cork states that "people throughout the rural districts generally avail themselves of this express system to get their produce, such as that of farm and market garden, to market. Dealers in fruit, game, fish, eggs, butter, meat and such commodities generally use this means of speedily reaching their customers or the market." The *hausfrau* in Germany receives her fresh vegetables, her poultry, and fruit along with her mail in the early morning delivery. They come fresh to her table from possibly one hundred miles away in a country village. A postal card changes the standing order. All Germany offers itself as a market for the German farmer. Producer and consumer are practically as close together as though they were elbowing at the city's markets.

The motor truck is another promising agency for minimizing local distribution costs. Figures compiled by the *Power Wagon* show that there were in the United States at the beginning of 1913 in the express, transfer and haulage business over 6,500 power wagons,

valued at \$6,000,000. This shows an increase over the previous year of 200 per cent. Farm produce when shipped over steam railroads must be handled a number of times. It must be loaded on wagons at the farm, placed on the station platform, loaded on the cars, unloaded on a platform, then placed upon a vehicle, taken to the wholesale market, where it is again unloaded, only to be loaded a few hours later on the carts and wagons of the retailer, to be taken to his store, then to be loaded on delivery wagons, to be taken to the consumer. With the use of motor trucks the produce could be loaded at the farmer's gate, then taken immediately to the section of the city where needed.

Moreover motor-truck service taps regions now isolated by reason of distance from market. Ten to fifteen miles is as much as farmers can profitably drive to market their produce. The motor truck with equal ease can tap regions forty, fifty, or even one hundred miles away.¹ Not since the advent of the railroad has a more significant distributing agency been introduced.

The savings of the motor truck within the city limits are even greater. Thomas Edison is reported as stating the case in this way: "Fifty per cent. of all the freight in the world is moved to and from railroad stations by the horse-drawn vehicle. The automobile truck of half

¹The approximate cost for operating a five-ton truck runs around 17 cents per mile, or about \$12 for 50 miles, \$10 for 40 miles, \$8.50 for 30 miles and \$7 for 20 miles. A large Brooklyn, N. Y., department store displaced 33 horses with 11 trucks, at a 6 months' saving of \$1,360 in favor of the machines. The four leading American express companies have already invested \$1,500,000 in motor trucks to facilitate the prompt and economical handling of packages. The Starkey Produce Company of Philadelphia supplanted 5 wagons with 1 truck and reduced time of a round trip from 9 to 3 hours. Through this means they could market perishable produce the day it was gathered.

the length takes double the freight and goes twice as fast."

Closely related to the possibilities of the motor truck is the location of freight terminal facilities so as to eliminate unnecessary trucking. Two thousand trucks in the city of New York have to earn about seven dollars a day before they make money for their proprietors. The average loss of time at terminals, because of congestion, is from three to four hours. When cities place terminals so as to eliminate unnecessary cartage and hauling, large saving can be made. In Philadelphia 5,000 vehicles are used in carting and hauling freight. At \$5 per day for 300 days per year, this means an annual charge of \$7,500,000. A proper city plan could materially lower these costs.

Transportation systems alone do not grow farm produce. Neither are foodstuffs grown until there is at hand the means for transporting them to market. Production and transportation mutually react to the advantage of both. Each must wait upon the other. Our transportation history is replete with illustrations to show the transforming effect that new and better transportation agencies have on the character and output of the farm and on the supply available to the urban dweller. The great need in the improvement of our existing transportation system is to focus attention more and more on increasing and perfecting agencies for efficient, economic local distribution.

CHAPTER X

MUNICIPAL MARKETS AND OTHER MEANS OF DIRECT MARKETING

The twentieth century city has two very definite food problems. One is to keep its gates open to the food supply of the nation and the world; the other is to open wide its gates to the output of the agricultural country round about. One unfortunate result of making available to each city the food supply of all sections of the nation, and indeed of the world, has been to cause the urban dweller to give all too little heed to the output and prosperity of the surrounding farming community. The twentieth century need is to encourage near-by farmers to sell at home.

THE OPPORTUNITY FOR SELLING AT HOME

No section of the United States is now wholly rural. In all parts of the nation the city is growing apace. In no state in the union from 1900 to 1910 did the urban population increase less than 10 per cent., while in 16 states it increased from 10 to 30 per cent., in 13 states from 30 to 50 per cent., and in 19 states over 50 per cent. In 6 states the rural population actually declined; in 6 states the urban population more than doubled. This growth of cities in all parts of our country means ever-widening possibilities for local marketing and for selling at home. As the season's output runs from south to north, each city, through national agencies, can now avail

itself of every possible variety of foodstuffs. But by proper civic action and coöperative encouragement each city can now buy an ever-increasing proportion of its own season's output at home. This buying and selling at home will mean a larger output from the surrounding farms; will mean the adaptation of that output to local markets; will mean stimulated land values and a more prosperous local community round about; will mean a richer purchasing clientele for the city's factories and stores; will mean goodly savings in food distribution, and hence lower food costs to city dwellers.

The farmer's income increases with his marketing facilities. The Cornell Agricultural Survey of March, 1911, found that the average annual income from labor by 615 farmers, operating their own farms, each with an average capital of \$5,527, was but \$423; and that the average annual labor income of 154 tenants was but \$379. Other sources also indicate that the average farmer does not make over \$700 per year, or less than two dollars per day. He does not make more now than does the average city wage-earner. This largely accounts for the exodus from the farm. It also points to the need, lest we become a nation of peasant farmers, for an increase in the farmer's actual income.

Increased facilities for selling at home will stimulate output. If we are to remain an exporting nation, our farmers must increase their yields and all land available to agriculture must be put to use. Due to the increase in urban population, without a corresponding stimulus to food producing, the amount of our exports is rapidly falling off. In 1904 the cattle exported were valued at \$41,000,000; in 1911 their value was \$14,000,000. From 1901 to 1911 the pounds of fresh beef exported fell from 354,000,000 to 9,000,000. Though a young nation, we are already on the verge of becoming dependent on the

outside world for an increasing portion of our food supply.

Selling at home will not only stimulate output but it will also have a psychological tendency to make the farmer adapt his output to local conditions. To derive the greatest possible profit from his products, the farmer must pay attention to the condition of his goods, to their appearance, and to economy and promptness in marketing them. While the output of any given farm will have to be adapted to soil and climate, to the abundance or scarcity of labor, to the size of the farm and to the tariff, yet, other things being equal, of greatest influence is the opportunity for marketing. Through proper marketing facilities, Munich, a city with a population of half a million, now gets one-fourth of its meats by road from neighboring farms.

To be sure, there has been much adaptation of local products to local markets. A map showing by shading the density of milk production and a map showing in a similar manner the density of urban population will reveal that the heavily shaded sections are almost identical. In orchard products, Pennsylvania's output increased more rapidly from 1890 to 1900 than did the average output throughout the United States.

But there is room for a greater adaptation. The number of chickens raised in Pennsylvania increased from six and one-half million in 1880 to ten and one-half million in 1900; but during this period the number raised in all the states increased from 102 million to 234 million. In egg production Pennsylvania doubled her output during these two decades, while the output of the United States as a whole more than trebled. That there are still great possibilities in adaptation of local output to the local markets is also revealed in the fact that Pittsburgh gets at least \$20,000,000 of its total annual con-

sumption of \$25,000,000 in fruits and vegetables from distant points; the garden crops produced on the surrounding farms certainly do not exceed \$3,000,000 in value. Yet with proper emphasis and encouragement, truck gardening around Pittsburgh can unquestionably be made to pay. In order to further local truck gardening, one public-spirited citizen of Pittsburgh purchased some few hundred acres of land and divided it into five- and six-acre tracks for gardening and poultry raising purposes. It is believed that three five-acre farms, convenient to such an excellent market, will return a profit of from \$1,500 to \$2,000 a year.¹

Cities cannot live solely by the exchange of goods among themselves. They must also exchange their products for the farmers' goods. The city's prosperity is in direct ratio to the cost of distributing its output. For the manufacturer as well as the farmer, selling at home means lower distribution costs. The greater the freight and transportation costs, the lower the returns for the urban store. Urban prosperity is enhanced by selling to and buying from the country round about.

In the more direct routing of food products lie golden prospects for lower living costs. Municipal markets and other means of direct marketing will further this direct routing. Local output will then have its effect on city prices.

Direct marketing can be extended through the development of the agencies of local distribution, discussed fully in Chapter IX, and in coöperation as discussed in Chapters XI and XII. The means for its encouragement as discussed in this chapter are three: municipal markets, slaughter-houses and direct sales by hampers or other methods.

¹ See J. T. Holdsworth: Report of the Economic Survey of Pittsburgh, 1912.

MUNICIPAL MARKETS

Municipal markets are not new. They were formerly found in every village and city. It was only in the latter half of the nineteenth century that the cities, absorbed in the development of their own industries, began to be neglectful of markets and market places. To be sure, fairly good markets still exist in many cities throughout the United States. Boston, Baltimore, New Orleans, Rochester, Indianapolis, Dubuque, Pittsburgh, Buffalo, Richmond and Norfolk all claim fairly good markets. Out of 158 cities reporting to the Census Bureau for the Statistics of Cities for 1906, 104 (including 28 that spent less than \$1,000, and, therefore, must have had no market policy of any importance) reported no expenditures for either markets or public scales; 42 reported expenditures of from \$1,000 to \$10,000, and only 12 of the 158 reported annual expenditures of \$10,000 or over. Out of 184 cities reporting for the Statistics of Cities for 1910, 88 reported no expenditures for markets and public scales; 35 reported an expenditure of less than \$1,000; 47 an expenditure of from \$1,000 to \$10,000, and but 14 an expenditure of over \$10,000. In other words, not over one city in a dozen throughout the United States has now anything like an effective market policy. Our cities are spending two dollars on cemeteries and crematories to one on markets: more, that is, on resting places for the dead than on food-buying facilities for the living.

Municipal markets do not develop themselves. The American attitude has been to set aside a building or a plot of land for a market and then expect the market to be a success. The making of a successful municipal market with maximum results necessitates virile energetic thought and supervision. In the first place, there

must be a terminal wholesale market in cities of any size where foodstuffs from both near-by and distant regions may be offered for sale as directly and as reliably as possible. A second essential is the adaptation of the kind and location of markets to modern customs, to movements in population and to transportation facilities. The third essential to a successful market policy is the encouragement of *farmers'* markets as distinct from merely groups of professional retailers, so that producer and consumer may be brought more directly together. Fourthly, charges for stall rents must be fixed at a point that will bring a reasonable return on the investment or present value, but not at a point that will return unduly large profits to the city. A fifth prerequisite to success is to give to stall renters every reasonable facility in buying, conserving and selling their produce. Again the markets must be so regulated and supervised as to cleanliness, purity of food, and honesty in weights and measures, that they will be preferred by consumers as a buying place above other places not so regulated and supervised. And, finally, there must be thorough and systematic supervision and administration of the city's market policy, including reports on retail and wholesale prices, so that the public markets may be a real competitive factor both in attracting trade and in fixing consumer's prices.

THE TERMINAL MARKET

The wholesale terminal market is needed to give a reliable clearing place at minimum costs for food produce, coming alike from neighboring farms and from producers in distant regions, thus securing to the city both the season's output of other climes and the greatest possible amount of selling and buying at home. Cyrus

C. Miller of New York City, formerly president of the Borough of the Bronx, has done more than any other person in the United States to point out the need for and advantages of terminal wholesale markets.

But few municipal wholesale terminal markets are found in America, and such as do exist are not always administered in a way conducive to the best results. Well administered terminal wholesale markets are characteristic of every European city. Typical markets of this character are found in Budapest, Prague, Havre, Lyons, Brussels, London, Paris. The establishment in Paris, for instance, located near the Louvre, and known as the *Halles Centrales*, consists of ten pavilions and open structures, partly covered by a roof, occupying in its entirety twenty-two acres and erected at a total cost of \$22,000,000. In this vast entrepôt the various market supplies are received by rail, by drays, by boats on the Seine River and by great wagons from the country; over one billion pounds of products are sold there every year.

The great need of American cities is to have properly located, adequately equipped and well administered public terminal wholesale markets. The prime essential for such a market is location at a point where the tracks of all the railroads entering the city can terminate. If possible, it should also be located near the water front with adequate wharfage facilities for all truck boats; if this is not possible, then there should be a second such market on the water front.

In order to fulfill its missions as a reliable terminal for produce sent into the city, a requisite essential to success is sale at auction by bonded city officials forbidden to be interested directly or indirectly in the trade of market wares of any kind. The commission to be charged by these licensed auctioneers must be definitely fixed. In Europe the commission ranges around 2 per cent. of the

total annual auction sales. This in itself is a much lower cost for selling than the usual commission charged in this country. This saving, however, is a very insignificant part of the total savings to be made by adopting the auction system. Great savings will be brought about through the elimination of all commission abuses, as depicted in Chapter VI. Of still greater significance, the producer will be tempted to ship to the city with such a department, knowing full well that he will get maximum returns for his goods. The producer then has three choices: either alone or in coöperation with others, he can rent stands in one of the retail markets; he can ship directly to some wholesaler; or he can sell at this public auction. The experience of European cities is that he prefers the third.

Just such results from auction departments in terminal wholesale markets are emphasized in the recent special consular report on European Markets.¹ Consul John C. Covert says as to this system in Lyons: "Fish and game are brought here for sale from England, Germany, the Netherlands, Russia and from all parts of France. If a grocer or butcher anywhere in France, in fact anywhere in Europe outside of Lyons, has an overstock of any kind of provisions, he is always sure that he can get rid of it at the central market auction in Lyons. Often a stock of provisions is sold here at private sale by correspondence for and to parties outside the city." Consular Assistant Frank Bohr writes as to results obtained in Berlin: "The municipal sales commissioners are bonded officials who are forbidden to be interested, directly or indirectly, in the trade in market wares of any kind. They are responsible to the market hall management, and are allowed to collect a certain fixed percentage of all sales made. The primary purpose of these officers is to

¹See Special Consular Reports, Vol. XLII.

offer distant dealers and producers opportunity to ship in their wares, and have them brought into the hands of Berlin dealers and consumers, through the agency of responsible middlemen and with the assurance of a published and steady price. A second or indirect purpose is that, through their competition with the private wholesale dealers and through the daily publication of their report on the average wholesale prices for all wares and at all the halls, the municipal sales commissioners exercise a steadying influence upon the entire wholesale business. Although it is estimated that they handle only about one-fifth of the total wares received at the central market hall, it is nevertheless conceded that they indirectly prevent extortion by the private wholesale dealer upon the producer or dealer on the one hand and upon the consumer or retailer on the other."

There can be little doubt that the auction department of the municipal wholesale terminal market is of great value in getting reliable and stable sales for goods sent in alike from the neighboring regions and from the most distant countries. To prevent abuse, it would be necessary to enforce strictly the regulation that all goods sold at the auction department must come from without the city.

Not only can trade be attracted from without by bona fide municipal auction sales at a terminal market and by similar means of giving confidence and publicity to such a market center, but facilities can also be offered of a character that will attract to such centers buyers from all parts of the city itself. As in European cities, chilled rooms can be provided into which perishable produce can be unloaded from the cars, and repacked to suit the trade, without the deterioration inevitably resultant from unloading in a warm atmosphere. Under the market hall, cool, clean cellars and ample cold storage facilities

can be made available to all buyers for temporary purposes at reasonable rates. This will mean goodly savings in transporting costs and warehouse facilities and will prevent spoilage and lowered values. A municipal canning and preserving plant conveniently located in the building, while paying for itself, will further prevent deterioration and waste.

A municipal terminal market makes for many economies in food distribution. By delivering cars right at the wholesale market, all trucking from the railroad terminal to the wholesale market will be eliminated. The significance and value of this saving will vary with each of the cities. For instance, every day from New England quantities of fish are brought to the freight terminal on the Harlem River in New York City, and, because of the lack of marketing facilities there, are then loaded on a barge and taken down to the fish market, there to be sold, only to be again carted back uptown. As the New York Market Investigating Commission has pointed out, a municipal market and distributing depot in the Lower Bronx on the Harlem River, at a point of convenient access to the railroads and water lines, will eliminate much of this useless trucking. It is safe to estimate that a terminal wholesale market will save at least ten to twenty dollars a car in hauling costs. It will effect even greater economies in time, in interest on investments and in facilitating the marketing of the food supply. At many railroad terminals there are such private wholesale markets now. But they are not adequately regulated, they are not supervised by public officials, and they are not coördinated with the terminals of other steam, electric and water lines.

A wholesale market would attract not only retail dealers, large and small, but also the larger consumers, such as hotel and restaurant managers, and, more pertinent

still, would make possible an increased amount of co-operative buying through consumers' leagues and consumers' coöperative associations. This direct buying without the retailer as an intermediary is definitely furthered by fixing the quantities that can be offered at wholesale at relatively small amounts. In the wholesale market at Havre, France, merchandise may be offered for sale in such small quantities as 6 ordinary sized bunches of vegetables; 9 quarts, or, when sold by weight, 11 pounds, of fruits and vegetables—even this minimum being reduced by half during April and May; vegetables which it is customary to sell by count, such as cabbages, cucumbers, tomatoes, etc., 1 dozen; oranges and lemons, 1 dozen; large vegetables, such as cantaloupes, melons, etc., in as small quantities as one of each. In Lyons, quails, partridges, ducks, etc., are put up in bunches of half a dozen or a dozen; eggs in lots of 100; oysters in boxes of 100; butter in lots of 50 pounds. With sales in such small quantities as these, the smaller consumers, through coöperation, and the larger consumers everywhere can buy with but one intermediary between them and the farmer, and that a public auction department that adds but 2 per cent. to the cost of goods.

Buyers can further be attracted to such markets through careful municipal inspection of the quality, quantity, weights and measures of all foodstuffs sold. Thus at the wholesale terminal market at Paris, supplies are received, inspected, weighed and sold to retailers and consumers under official supervision so constant and efficient as to preclude the sale of unwholesome food products and to prevent extortion and trickery.

Of greatest value to the wholesale terminal market, both because it advertises the market to the producers everywhere and because it gives a basis for comparison with the prices secured by private dealers, is the publish-

ing of a daily bulletin giving the wholesale price of produce, and at least a weekly bulletin giving the retail price as paid by city consumers. This is done in certain European cities with telling effect. Thus the market at Budapest publishes a daily bulletin giving the wholesale price of produce, and a weekly list of retail prices, declaring itself not to be responsible for any controversy which may arise as to results thereof. No one activity on the part of market officials could more forcefully stimulate direct marketing than such published bulletins. Farmers could then have reliable information as to what prices they could secure at wholesale and what prices they could secure by selling their articles directly to consumers.

The economies and savings effected by well located, properly administered, carefully inspected wholesale terminal markets are, indeed, of no mean proportions. Mr. John C. Covert, Consul at Lyons, says of the results attained by the wholesale market there: "During the auction the market women and the keepers of small groceries, fish, fruit, and vegetable stores, fill the space in front of the auctioneer to replenish their stocks. This market is most emphatically favorable to the poorer classes. Many poor people bid off a bunch of game or fish, dividing the expense among themselves, thus procuring a luxury that they could not otherwise enjoy. It creates a center in the city to which food comes from many points, largely increasing the supply. It reduces the prices of retail dealers in the market and sharpens competition. The auctions are always public and the woman who buys of a small dealer often knows just how much the dealer paid for the article in the market that morning."

RETAIL MARKETS

But the terminal wholesale market will not alone fill all the city's needs. The city's scattered business of wholesale marketing cannot all be attracted to, or forced by legislation into, a single terminal market. The rapid suburbanization of cities calls for an equally rapid suburbanization in food distribution. While the big wholesale market will afford facilities for large food movements to and from the primary markets, yet the city consumer's own needs require as well near-by retail markets.

The second essential to an adequate, constructive municipal market policy is the adaptation of the city's retail markets to movements of population and to the city's environmental needs. As residential centers change district markets decay. Stall rentals must, therefore, be sufficient to provide depreciation and replacement funds so that markets may be relocated in order to follow population movements. The typical European market system includes the central wholesale terminal market, as above described, where retailing is also permitted, and a number of branch retail markets. Thus in Paris, there are, in addition to the *Halles Centrales*, 33 small retail public markets. In Budapest there are one central and six branch markets. In Antwerp there are two covered and nineteen open-air markets. The decline in certain retail markets due to population movements or a decline in their relative importance as in certain European cities due to public auction sales of small quantities, have both been wrongly used to bolster up the contention that district retail public markets are inadvisable.

Not only must the retail municipal market be adapted to population movements, but it must also be adapted

to modern conditions and usages. The retail unit characteristic of the day of the telephone and central supply station is a small store, such as the Acme Tea stores, the United Cigar Company stores, the Horn and Hardart restaurants, where there is a quick turnover of capital, and where delivery charges are low. The retail municipal market, to be successful, must adapt itself to this tendency. Its size will, therefore, depend on the number of buyers round about and will be different for each city and in each section of the same city. It need only be large enough to offer a sufficient variety to the purchaser to tempt him to come there to buy. Its success or effectiveness, therefore, cannot be measured solely by the number of stall renters or purchasers. To compete with modern retailing methods there must be co-operative deliveries, and to compete with the central buying concerns there must be coöperative buying among the stall renters. In general, through their associations or otherwise, the stall renters must form an aggressive, competing unit, fully cognizant of the advertising value of public inspection of their foodstuffs and public supervision of their sales practices.

If municipal markets, wholesale or retail, are to be of the greatest social value, every effort must be made to encourage their use by farmers and other food growers. The market of former days was essentially a place where producer and consumer met. But today the stall renters in the markets of the American city of any size are almost all professional retailers and in no sense farmers or producers. Thus in the Old South Second Street Market of Philadelphia, the larger of that city's two municipal markets, out of 315 stall renters, there are not over a half-dozen farmers. Indeed in only ten of that city's forty-seven wards do farmers play any considerable part in the sale of foodstuffs, and even in these ten

wards they do not sell to over 10 per cent. of the people. The time should come without doubt when the difference between producers' and consumers' prices will not tempt the farmer to turn salesman for his own goods. But that time certainly is not here now.

In the meantime, and indeed, for competitive reasons, even after this happy state is reached, every encouragement and protection should be given to farmers who desire to sell at the city's markets. In certain of Philadelphia's markets many professional retail dealers in no sense farmers have put up signs proclaiming themselves to be Bucks County, or Montgomery County, or Lancaster County farmers, selling only goods fresh from their own farms, when, as a matter of fact, they have bought the goods that morning at wholesale, or, at the best, are jobbers who buy from farmers. Want of confidence results as purchasers sooner or later learn of this fraud; and both bona fide farmers and buyers then stay away from the market. City ordinances should provide that none but bona fide farmers should display farmers' signs.

Another legal obstruction to the farmers' use of city markets in Pennsylvania is the fact that the mercantile tax laws of that state exempt from the retailer's tax the farmer who sells his own goods, but do not exempt him if he brings in the goods of his neighbor. In the days when this law was passed, in the third decade of the nineteenth century, this statute worked no hardship, as it let into the city, free of tax, about all the farmers who chose to come in, that is, those not over a fair day's drive out. But now in the days of trolley freight, the motor truck, the gasoline barge and better roads, the radius of possible marketing is fivefold what it then was. Now farmers must, to pay for their time, bring in their neighbor's goods as well. To amend this tax law

so as to permit this would largely increase the amount of food produce sold directly from the farmer to the consumer. Of like inhibitive effect is the license fee of one dollar required to sell poultry in Philadelphia. The average farmer does not feel it worth his while, for the small number of chickens he can sell at any one time, to take out the license. There is no inspection that accompanies the license; it is primarily a source of revenue only. These are small things, to be sure, but the tendency is to multiply such small restrictions instead of endeavoring to take away unnecessary obstacles and offer every inducement to the farmer who wishes to frequent the city's markets.

THE CURBSTONE MARKET

To give farmers minimum rental costs, at slight expense to the city, in good residence locations, many cities in America and Europe have set aside streets for open-air or curbstone markets. Vienna has forty such open markets; Antwerp nineteen. The rental for wagon space, as a rule, is nominal only. Thus in Atchison, Kansas, and San Antonio, Texas, a charge of ten cents a day is made for each wagon, while in Buffalo the rate for a one-horse vehicle is twenty-five cents; for a two-horse vehicle, fifty cents per day. In Brussels the charge is one cent per day, while a bench may be secured for two and one-half cents, or a covered stall for five cents, furnished and set up by the city. This practice of merely nominal rentals for stall space is no doubt the correct one. Careful inspection will be necessary to make sure that all space renters in such markets are bona fide farmers. If other vendors are allowed to use such markets at all, they should be segregated in sections

clearly marked by placards as set aside for vendors not farmers. This is done in Rochester's market. A third section could likewise be set aside for pushcart vendors. All licensees must be required to deposit their refuse and papers in rubbish cans with secure lids and every other precaution taken to keep the streets sanitary and clean. Collapsible counters and coverings should be available for use in sunny or in rainy weather, to be removed by their owners after the market is over.

The pushcart, the vendor's wagon and the open-air farmers' markets offer the cheapest possible store at adaptable locations, and thus should give avenues for food distribution at minimum costs. While there can be no doubt that the covered market will be the better in the long run, yet the open-air curbstone market offers a good temporary method of attracting farmers and of giving consumers an opportunity to buy directly. Two and a half miles of streets in Cleveland are lined by 1,300 farmers and 400 hucksters. Both Baltimore and Montreal attract 1,500 wagons each market day by their curbstone markets. The results of such a market in Des Moines have been described as follows: "Between 100 and 200 farmers gather on the City Hall lawn and in the streets adjacent thereto between the hours of 5 and 10 o'clock in the morning, without paying any license or rent. They are permitted to sell direct from their wagons to the city consumer. The result has been that they have received approximately 50 per cent. more for their produce than the commission men paid them before, while the city buyers get their produce for approximately 50 per cent. less than was paid formerly. By compelling the sellers to display large cards stating whether they are gardeners or hucksters, the public is enabled to discriminate and to purchase direct from the man who grows."

The Secretary of the Chamber of Commerce of Oklahoma City says of the effects of the curbstone markets in that city: "There can be no question as to the market having reduced the cost of living to the average family in Oklahoma City. Where one has choice of all manner of farm vegetables, at very low prices, many of them are purchased and more of them used than ordinarily. Besides farm vegetables, there are such things as chickens, other prepared meats, home-cooked dishes of various kinds, all of these being brought on the market for sale. . . . The first day there were about seventy wagons present on the market, and a small crowd of buyers. Within a few weeks we counted 318 wagons on the street (their contents valued at \$5,000), and a swarming crowd of people who jostled and shouldered each other in their efforts to secure the choicest first." (Written September 14, 1912.) Speaking also as to the results of this same market, another writer says: "Actual figures, comparing the retail cost of all kinds of food supplies in Oklahoma City with those of a year ago, show decreases ranging from 25 to 50 per cent., nor is this the only benefit the city has obtained through the establishment of the market, for the facilities for the sale of farm and garden produce have greatly stimulated agricultural settlements in the vicinity. Since the market was established more than twenty-five families have taken up small tracts adjoining the city, for truck gardening, and hundreds of inquiries from others who wish to take advantage of the market have been received."

The success of the market idea having been fully demonstrated, the farmers and truck gardeners formed an association and leased a large building, which they converted into a market house with more than 200 stalls, where not only the farmers but also dealers in meat

and fish and bakery products are brought into direct contact with consumers.

ADMINISTRATION OF MARKETS

Since the purpose of municipal markets is to give facilities to producers and lower prices to consumers, stall rentals should be fixed at the lowest point that will mean a fair return on the investment and provide for adequate renewal and depreciation funds. This principle has been fairly well carried out in many cities. A fresh-meat dealer in the central market of Paris can rent a stall, secure the service of attendants, and pay for sweeping and cleaning for about \$6 per week. One who sells salted meats, tripe, etc., can get through the week with an expenditure, including service of attendants, sweeping, etc., of about \$3.53. Other stalls are still cheaper. Stalls in the covered secondary markets are rented at from 10 to 30 cents per day. In Berlin the highest rental for meat stands is $9\frac{1}{2}$ cents per square meter per day when rented by the month, and 12 cents when rented by the day. Fruit stands vary in rental from 5 to 9 cents per day.¹ Stalls in any one of the three substantial brick market buildings in Indianapolis may be rented at \$2.75 to \$7.00 per month.

¹In Rotterdam the stall rentals for vegetables and fruits are \$2 per year, 20 cents per month or 6 cents per week for a space of about 20 square feet. In Birmingham the rents for stands in the wholesale markets average about 18 cents to 24 cents, with an occasional 40 cents per square yard per week; while in the retail markets the rents for stalls and shops vary from 24 cents to \$4.37 per week, according to position and class of business. Germany has subsidized her municipal markets by a law reducing the import duty one-half and railroad charges one-third for all meat sold in municipal markets or by coöperative societies.

Even with such moderate stall rentals, there seems to be no difficulty anywhere in running markets at a profit.¹ But the success of municipal markets must never be gauged in terms of profits. The city should be satisfied to get a reasonable return on its investment.

Of greater importance than low rentals are adequate and proper facilities for stall renters and for the purchasing public. The public must have clear passageways and fair purchasing opportunities. All noises, singing, acrobatic performances and distribution of handbills must be prohibited within market limits and within a reasonable distance from the market. Hawkers and peddlers must be forbidden to ply their trades within at least five hundred feet of the market. The terminal wholesale market will, of course, have maximum transportation and distribution facilities for both the general and the country trade, with railroad tracks on both sides to facilitate unloading, with ample wharfage, docking and transshipping machinery. Each of the small markets, where possible, should have branch terminals, especially from all the transporting agencies that reach out into the surrounding farming communities. Thus trolley terminals at each market will give an avenue for direct buying in less than carload lots and an easy and popular outlet for the surplus of small farmers. Good direct roads will encourage wagon and motor-truck shipments, while wharfage facilities will stimulate the movement of food by water. Not only can such

¹ Paris has an annual profit on its markets of about \$1,000,000; Berlin, \$135,000; Liverpool, \$85,000; Birmingham, \$156,000; Vienna, \$60,000; Budapest, over \$100,000; Glasgow, \$14,000. There is likewise a profit in American cities. Boston has an annual profit on its markets of \$60,000; Baltimore, \$70,000; New Orleans, \$79,000; Buffalo, \$44,000; Cleveland, \$27,000; Washington (D. C.), \$7,000; Nashville, \$8,000; Indianapolis, \$17,000; Rochester, \$4,000; St. Paul, \$4,000.

markets have good facilities for incoming freight, but the stall renters, under proper coöperation among themselves, and with the market officials, can also effect economies in help, in ice, in storage, and in deliveries. The goal should be the elimination of unnecessary costs to all, that the purchasers may secure their goods at minimum prices.

But minimum prices, it must ever be remembered, may in reality be unreasonably high prices, unless accompanied by honest weights and honest goods. The one great social and advertising advantage of municipal markets, both for the stall renter and the buyer, is the opportunity afforded by the very nature of the market to enforce the laws and ordinances aimed at adulteration, misbranding, underweights, and false measures. Buyers will ultimately seek out the well regulated and well inspected market. By protecting its citizens through virile inspection, the city will also ultimately further the best interests of the stall renters themselves. Inspectors of the Health Department visit Baltimore's market daily. In certain European cities, such as Budapest, all meats must be inspected before they can be offered for sale. Inspection by market officials, coupled with inspection by city and state food inspectors, should make it almost impossible to sell adulterated, decayed, misbranded, deteriorated, diseased or misrepresented foods or goods at the city's markets. The market buildings can be light, well ventilated, thoroughly cleansed and wholly sanitary. Reasonable regulations can be made as to screening goods from flies and requiring perishable goods to be kept properly chilled.

Health officials, however, need to be constantly reminded that their ends are to be attained by the least expensive, effective means. Food contamination means poor health, suffering, and oftentimes death. Health

and pure food officials, who must prevent these disastrous results, are not always careful to accomplish their ends by the least expensive yet effective means. Foods must be protected, even to be cheap, yet the method of protection should not of itself be an undue burden to the business man and the consumer. Through sane regulations, virilely enforced, the municipal market can be made the best place for all to buy. Stall renters as well as consumers will ultimately profit by such standards.

The goods offered for sale in markets, especially in those located in the poorer districts, need not be limited to foodstuffs. In the markets of Antwerp are offered almost everything, from vegetables, meat and fish, to second-hand books, old clothes, furniture and household goods. In the markets of Budapest are found hardware, toys, underwear, hosiery, etc. In Prague are found kitchen novelties and all the various articles usually found in the American ten-cent stores. In Lyons there is a special market, where manufactured goods can be sold cheaply. To prevent abuse, each class of goods can be restricted to prescribed sections of the market. The sale of various kinds of goods at the markets will both entice purchasers and facilitate their buying at reasonable prices. Cheap rents mean low prices, and low prices will ultimately mean higher real wages.

Municipal markets have secured results. In Cincinnati 60,000 people flock to the Saturday market; in Baltimore, 50,000 on all market days. Henry G. Gniffke thus enumerates the results secured by the open-air market in Dubuque, Iowa:

1. Dealer and consumer come together. There is no middleman's profit to pay.

2. The dealer is under scarcely any expense for rent, fixtures or help.

3. For over 99 per cent. of the stuff sold here, there has been no freight bill to pay, no cost of crates, refrigeration or boxes.

4. The seller has no real waste, because he can always dispose of any surplus he may have over to the grocers, the shippers and other dealers, besides the home bargain hunters.

5. The purchaser is always sure of fresh stuff.

6. Supply and demand fix the prices, modified by the demands of the shippers for other towns and the abundance of stuff sent in.

7. The variety to choose from is nearly without limit at some seasons.

An additional advantage of the market comes to the small man who has a surplus that he has raised. He can bring that to the market. For the fee of from 5 cents upwards he can find a place where he can sell this to the very best advantage, with really no expense attached to it. This also applies to the small dealer who goes out into the country and buys truck to resell.

Consul-General Henry W. Diederich says as to results obtained by the market at Antwerp: "On account of the cheap rental of stalls, merchandise for sale in the markets is sold at prices lower than those prevailing in the stores and the farm and dairy products and vegetables bought at the markets are fresher and usually of better quality."

One principle as to market success has not been sufficiently clear to the buying and tax-paying public, and that is this: The value of the market to the city and to the consumer depends entirely on the efficiency and thoroughness of the city's market superintendent. Market failure can most often be traced to the sodden interests or the narrow vision of the market master. Markets left to themselves tend to become but groups of grasping retailers, with no interest in public standards and no vision as to results accruing from enforced quality for goods and decency in sales practices. Upon the administrator of the market depend its cleanliness, the effective-

ness of its inspection, and the extent of protection to the producer, the honest retailer and the consumer. The value and effectiveness of the market as an agency for distributing goods wholesale at lowered prices depend primarily upon the rigidity with which its affairs are administered. The official in charge must, therefore, be of high character, steadfast in standards, with power to bring all stall renters to high business standards, and ability to attract to the market both producers and consumers. A market thus administered will be a vital and uplifting factor in feeding a city.

In need of as careful supervision as the market itself are the vendor and the pushcart peddler. The cheapest retail store of the day is the pushcart, often obtained at a cost of 25 cents per day, or a vendor's wagon. Philadelphia receives twice as much for vendors' licenses, at \$10 per year for one horse, \$15 for two, as from market stall renters at from \$16 to \$20 per year. In this city and others, the greatest possible abuses in sanitation, in deceitfulness as to the quality and quantity, in food deterioration, occur through the vendor, especially those of the pushcart type. Many observers doubt that the abuses of the pushcart vendor can ever be even reasonably abated by any kind of supervision at all commensurate with its cost. Unless this can be done the practice must, to be sure, be prohibited. If permitted at all, it should be limited to allotted spaces on prescribed streets, under careful supervision by the city's market superintendent. Vendors using vehicles, as well as pushcart vendors, should be clearly distinguished from bona fide farmers who wish to sell on the street; through placards, deception can be made practically impossible. Vendors, even though they are farmers, should be thought of as itinerant stall renters and should, if anything, be more carefully supervised than the stall renters in the

markets themselves. There can be no question that, in order to insure a uniform market policy, vendors should be under the same kind of inspection and administration as are the city's markets. Under proper supervision, however, the quality and quantity of foods offered by such peddlers can be sufficiently guaranteed to warrant their continuance, especially as their prices are, according to several bona fide investigations, around 20 per cent. lower than those asked by other retailers.¹

MUNICIPAL SLAUGHTER-HOUSES

A second civic activity by which a more direct and especially a more wholesome route can be secured for foodstuffs is the establishment and operation of municipal slaughter-houses. Only in the United States is slaughtering to any extent still left in private hands. Of the fifty largest towns in Germany forty-three own their own abattoirs and require that all meats sold in the city shall be slaughtered in them. Dresden in 1910 finished an immense cattle market at a cost of \$4,264,000, the largest and most completely equipped slaughter-house in Germany. Düsseldorf has a million dollar slaughter-

¹"The McClellan Commission of New York City reported: 'There is no danger to the community from the food supplies sold on pushcarts; the quality of the food is generally as good as, and often better than, that sold in neighboring stores.' In Manhattan this Commission's investigators found pushcart food 'good' in 71 per cent. of 1,952 cases, 'fair' in 23 per cent., 'bad' in 1 per cent., and 'injurious to health' in less than one-half of 1 per cent. The Commission's census of pushcart peddlers resulted in finding 'between 4,000 and 5,000 plying their trade in the streets of New York.' Their earnings averaged 'from \$12 to \$15 a week.' The percentage selling food in New York and Brooklyn was identical—69."—"Markets for the People," p. 60. In many European cities the supervision of these vendors is ample.

house in which all the meat slaughtered and used in the city is inspected by municipal veterinary surgeons. In Italy every town of more than 6,000 inhabitants is required to build and maintain its own slaughter-house. The slaughtering is done by individual butchers, but the city provides the building, keeps it clean, and furnishes veterinary inspectors to examine the meats. Even in Russia the laws for a quarter of a century have required that all animals for food purposes must be slaughtered at the city abattoir. In almost all of the other countries of Europe, as well as in South America, Egypt and in the Far East, the private slaughter-house has been closed. Not since the time of the first Napoleon have private slaughter-houses been tolerated in French cities. In Switzerland, Holland, Denmark, Austria-Hungary, Scandinavia, slaughtering has been in public hands for years. All meat in Switzerland for public sale must be either slaughtered, inspected and stamped by public officials at public abattoirs or slaughtered by private concerns under special and infrequent permission.

These slaughter-houses are widely used. In the abattoir at Liège, Belgium, 95,000 animals are slaughtered annually. In Milan, Italy, the number of animals slaughtered in 1907 totaled 166,277; while in Birmingham, during the year ending March 31, 1909, the number of animals slaughtered at the abattoirs connected with the city markets totaled 101,981. In London's great cattle market, at Islington, covering 75 acres, erected at a total cost of two and one-half million dollars, nearly 200,000 animals are slaughtered annually. The value of the animals slaughtered in Berlin's abattoir in 1905 was \$55,000,000.

In not over half a dozen cities¹ in the United States

¹Public abattoirs with municipal inspection are maintained at Paris, Texas; Montgomery, Ala.; Nashville, Tenn.; Dubuque,

are there public abattoirs with municipal inspection. It is usually thought that federal inspection is adequate, but only half the animals slaughtered in the United States come under federal supervision. Most of the remainder are slaughtered in private abattoirs in or near the cities. These are often, all too often, dirty and insanitary. In many instances they are drained into near-by streams and frequently the offal is thrown on the banks to decay or to be eaten by hogs or rats. Trichinosis is disseminated by the rats, tuberculosis by the hogs, hog cholera spread through the farms lower down, and animal parasites carried to livestock. Absence of inspection means that much of the meat is unfit for human consumption.

As with the city market, the effectiveness of the city abattoir depends primarily upon the moral and social standards of the supervisors and upon the reasonableness and effectiveness of the charges and regulations made for their use. The possibility of double inspection—on hoof by a veterinary surgeon and of the meat by a trained inspector—affords every possible safeguard to the purity of the city's meat supply. A system of checks can be devised whereby responsibility for careless in-

Iowa, and Los Angeles, Cal. The following thirty-five cities in the United States now have ordinances requiring all meat or meat food products sold therein to be federally or locally inspected, passed and so marked: Atlanta, Ga.; Birmingham, Ala.; Bridgeport, Conn.; Buffalo, N. Y.; Cleveland, O.; Columbus, O.; Denver, Colo.; Dubuque, Iowa; Duluth, Minn.; Elmira, N. Y.; Eureka, Cal.; Lafayette, Ind.; Fulton, N. Y.; Haverhill, Mass.; Los Angeles, Cal.; Macon, Ga.; Memphis, Tenn.; Milwaukee, Wis.; Nashville, Tenn.; New Orleans, La.; Norfolk, Va.; Oakland, Cal.; Omaha, Neb.; Portland, Ore.; Richmond, Ind.; Seattle, Wash.; Shreveport, La.; San Antonio, Texas; San Diego, Cal.; San Francisco, Cal.; South Omaha, Neb.; Topeka, Kan.; Walla Walla, Wash.; Winchester, Va.; Saginaw, Mich.

spection can at once be placed upon the negligent or indifferent inspector. Likewise essential are ample cold storage facilities. The cold storage facilities of the slaughter-house at Liverpool accommodate 2,176,000 carcasses. Not only is the consumer assured that his meat is fit for food and the retailer and wholesaler given ample cold storage facilities for the preservation of the meat, but the costs for selling are so low that consumers' prices should ultimately be more reasonable.

The properly conducted public abattoir offers an agency of no mean significance whereby a wholesome and direct route can be assured to the producer.

EXPRESS AND PARCELS POST

Wells Fargo and Company have taken a step toward the solution of the marketing problem by the creation of an Order, Commission and Food Products Department, the aim of which is to study the food products problem from various viewpoints, and to encourage and assist growers and producers by aiding them in finding suitable markets among dealers and consumers, and in securing, at minimum cost, suitable sanitary packages or containers in which to ship. One of the important functions of the department is the frequent publication of bulletins, designed, not only to give to the public information as to what the department is doing, but also to acquaint them with unusual offers, such as the shipment of individual packages of fruits, vegetables, etc. The information gathered by this department will enable producer, distributor, carrier and consumer to keep more closely in touch with one another, to the material benefit of all.

Of special significance also is the new parcels post law, under which farmers and consumers have at their

disposal mail facilities for shortening the route from producer to consumer. An experiment worthy of note was that carried out by the local post office at Washington, D. C. This office published lists of farmers and truck gardeners having butter, eggs, vegetables, etc., for sale, and furnished such lists to patrons of the office who would likely be interested in dealing directly with the producer. The following post offices also used this plan of bringing producer and consumer together: Birmingham, Ala.; San Francisco, Cal.; Athens and Atlanta, Ga.; Rock Island, Ill.; Baltimore, Md.; Boston and Lynn, Mass.; Detroit, Mich.; St. Louis, Mo.; La Crosse, Wis.

In recent years a third promising method of direct marketing has been developed and that is the shipment in a hamper or similar package direct from the producer to the consumer. Any kind of a package would, of course, suffice, but the more stable usage is a returnable package that can be wired and sealed. The hamper used by Mr. H. B. Fullerton, Director, Agricultural Development, the Long Island Railroad Company, Medford, Long Island, when filled weighs about thirty pounds, and contains selected vegetables and fruits, such as four-full-quart basket of potatoes, four-full-quart basket of tomatoes, four-full-quart basket of lima beans, four-full-quart basket of apples, four-full-quart basket of corn, from ten to fifteen ears in accordance with variety, two large bunches of radishes, two bunches of onions and a bunch of parsley. Mr. Sprackland, of Barrington, New Jersey, has used a farmer's basket weighing twelve and one-half pounds. This basket is eighteen inches long, twelve inches wide and nine inches deep. It contains: one quart of lima beans; one quart of tomatoes; one small head of cabbage; one quart of string beans; six green peppers, and one bunch of "pot herbs" containing eight different vegetables and seasoning herbs. Mr. Fullerton's

special reason for giving this method careful attention was that "in many instances our returns from the New York merchants did not cover cost of material used in packing and expressage, much less labor entailed in planting, cultivating and harvesting." The result has been an unexpected demand for the hamper from Michigan, Illinois, the southern states, and even France, and reports have invariably come back "Hamper received. Contents in perfect condition."

The more extended use of such methods of direct marketing can, without doubt, be brought about by the proper development of a parcels post system with rates based on cost of service and reasonable returns to the government. The postal express of Germany and Great Britain has made for an increasing number of just such shipments of such parcels both from and to the farmer. Invaluable assistance can also be given by market bureaus of the city and state in furnishing to farmers the names of bona fide urban dwellers who wish to buy directly. Direct shipments can be furthered through co-operation by producers with the central distributing station in the city, if need be, and through coöperation by consumers.

CHAPTER XI

STANDARDIZATION AND EFFICIENT MARKETING THROUGH PRODUCERS' COÖPERATION

The nationalization of food supplies necessitates the nationalization of marketing methods. The nationalization of marketing methods means primarily standardization of products and packages and sales through market specialists.

In the nineteenth century the farmer sold through a local merchant who was constrained to give him fair prices in order to retain his trade. The twentieth century offers distant markets at cash prices; it consequently necessitates new marketing methods. Goods must be stored; they must be sorted to the trade; they must be packed for longer and more direct shipments; the best market must be found and maximum returns obtained; if costs are to be kept down, purchases must be made at minimum prices; money and credit for doing this new business efficiently must be economically obtained. These twentieth century necessities to profitable food production and distribution are often obtained for the average farmer with best results and least expenditure through coöperative associations. Better returns to producers through better business management; elimination of waste and decay by better preservation and more direct shipments; economies in marketing; better and fresher goods to consumers at prices shaved of unnecessary costs—all can be everywhere furthered by co-operation among producers. The twentieth century coun-

tryman, like his city cousin, best furthers his prosperity and individual effectiveness through purposeful coöperative action.

Coöperative selling among producers gets better prices and more stable returns. Through coöperation farmers can keep a market specialist at work, grading, packing, stamping, storing and selling; watching markets with an experienced eye and more than paying for his salary through time saved to the farmer, through higher prices and through the elimination of sales abuses.

The very shortening of the route from producer to consumer means an increased amount of direct buying by jobbers who are interested in paying the lowest possible price in order to make greater profits through retailing. The bona fide commission merchant, uninterested in retailing, had some interest in getting the highest price; as the greater his gross returns, the greater his gross commission. The current tendency is for direct buying by jobbers who buy to sell again and hence are interested in giving the lowest price practicable. The producer, therefore, must have greater bargaining power. With the farmer, as with the laborer, this means collective bargaining. Through coöperative selling only can the farmer secure equality in sales-making power.

From every land and clime comes golden testimony as to the value of coöperative selling. Through the establishment of coöperative elevators, the farmers in northwestern Minnesota in three or four years increased their returns on wheat from fifteen cents to twenty cents per bushel. Nearly two-thirds of California's producers of oranges and lemons are federated under the California Fruit Growers' Exchange. This Exchange gathers information about crop conditions, about market demands, about daily sales and prices, maintains bonded agents in all the primary markets, handles all claims,

conducts litigation, looks after general transportation matters, carries on advertising campaigns, receives all remittances, accounts for all receipts; in other words, it acts as a scientific, highly specialized, marketing agency. Almost all of the lemons and oranges grown in California, totaling a train of refrigerated cars about 320 miles long, are marketed through coöperative associations. The Hood River Apple Growers' Union of Oregon, with a paid-up capital of \$25,000, controls the packing, storing, shipping, and inspection and selling of the apples. Since its organization it has increased the price received by its members from sixty cents to two dollars a box.¹

Irish coöperative societies have done a total business in

¹The Dassel Coöperative Association in Minnesota sent out in the year ending December 31, 1911, 180,000 dozen of eggs, for which its members received nearly \$50,000 in cash—\$9,000 more than they would have received under the old system. The wool growers of the Northern Rocky Mountain Region have established large warehouses in Chicago and Omaha to which wool is consigned to be sold by representatives of the association. Manufacturers as well as buyers are among the dealers. The Monmouth County Farmers' Exchange of Freehold, New Jersey, an organization of market gardeners and truck growers, operates through a territory fifty miles in length, is in telephonic communication with all of the thirty loading stations and with all of the primary markets. It receives and ships the products of the members, makes collections and distributes the proceeds. The Coöperative Agricultural Society of England, aided by the Agricultural Organization Society, grades and distributes farm produce, and informs its members through selling agents as to the quality and price of produce in the various urban markets. In 1908 the turnover of the six export associations of Denmark amounted to over \$40,000,000. Through coöperative associations the farmers of Denmark have been exporting more than \$90,000,000 worth of butter, eggs and meats every year. Half the total annual output of \$20,000,000 of the exported butter of Ireland is sold through coöperative creameries.

twenty-two years of \$125,000,000, with a turnover in 1911 of \$15,000,000. Space forbids the enumeration of other similar undertakings. Such a survey, however, indicates more forcefully than could any other method the far-reaching social and economic effects of coöperative selling.

The immediate sequel to direct selling through such associations is emphasis upon standardization in grading and packing. Herein lie savings and economies of no mean proportions. The grower is encouraged to produce better goods, produce and packages are standardized, deterioration and decay are stemmed, re-sorting and re-grading at heavier urban costs are eliminated, and a more direct route of the goods from producer to consumer is made possible. With goods and packages standardized the wholesaler, the jobber, the retailer, the consumer can buy more directly. Risks are eliminated and qualities and quantities assured. With coöperation the importance of standardization is brought home to all, and the group's standards are maintained only through vigilance by and over each member. It is this fact that makes coöperation a more efficient standardizing force than the efforts of isolated individuals.

The California Vegetable Union supervises the seed, the planting, every detail of production and then sorts, packs and ships vegetables to the eastern markets. The walnut growers of California through their coöperative association assemble, grade, pool and market their nuts. Formerly no farmers could afford to ship save in car-load lots, and many growers, therefore, had no way of disposing of less than carload lots. Now, with all the nuts pooled, there is no such difficulty. The nuts being well graded and packed find a ready market and the middlemen's and speculators' and similar charges are saved to the producer or to the consumer. The Aroos-

took Potato Growers' Association of Maine grades the potatoes of some seven hundred producers and ships them in carload lots as a rule directly to wholesale or large retail dealers. This association performs the service of the shipper, commission man, broker and wholesaler, and oftentimes also the retailer. In England agricultural societies maintain depots and selling agents in near-by towns, where their produce is distributed, and, if need be, regraded, re-sorted and repacked. The effect of such coöperative action is noticeable, not only on the members of the coöperative associations themselves, but also on neighboring individual farmers who are thus stimulated to raise better goods and get them in better shape for shipment.

Closely allied with the sorting and packing of goods by coöperative action are the standardizing of certain products and the creation and advertising of brand goods. An illuminating illustration of the methods and results of this kind of work is furnished by the Danish Co-operative Export Society, organized in 1895, the purpose of which is to standardize output and bring about greater stability in price. The central society is the federation of local coöperative associations. Each producer must stamp his eggs with his own number and that of the group to which he belongs. It is thus possible to fix responsibility not only upon the farmer but also upon his coöperative society as well. Fines await the delinquent farmer. Because they are always fresh, well sorted, well packed and guaranteed, the eggs sold by this society bring fancy prices. Its total export business in 1908 was more than \$6,600,000. Certain Irish poultry product associations not only stamp, sort and pack the goods, as does this Danish society, but pay for eggs entirely by weight instead of by number. The poultry and eggs thus handled are sold in the British

market by a central sales manager, who receives a small commission. The result has been increased returns to the Irish producer.

In this country the Growers' and Shippers' Exchange of Rochester, New York, has had noteworthy success in standardizing both farmers' goods and prices. Packages are used small enough to pass through the hands of retailers without losing their identity. Thus apples are marketed in pasteboard cartons, holding a peck each. Potatoes are shipped in fifteen-pound sacks, and grapes in four-pound baskets. Each package bears the label of the exchange. The result has been that the producer gets from seventy to eighty cents out of the consumer's dollar instead of thirty-five cents as formerly. By standardizing, labeling and branding its goods, the New England Cranberry Sales Company has made for efficient selling methods and for nation-wide standards in cranberries. The Rocky Ford Melon Growers' Association of Colorado through rigid, accurate grading and standardizing and the most careful packing, has made the Rocky Ford melon famous.

The results of such standardization are of far-reaching import. When the brand or standard of goods is known, and when the containers are standardized, the routing from producer to consumer is shorter and made much less expensive. There is a stimulus to high-grade goods, and the retail price through advertising and custom soon becomes fixed. The opportunities for retailing abuses in prices, in weights and measures, in adulteration, in substitution, are thus reduced to a minimum.¹

¹ Steps other than the standardization of goods are being taken by many coöperative societies in order to further sales, increase returns and augment output. More potent than any other one factor in giving Denmark her supremacy in the dairy industry have been the Dutch coöperative cow testing associa-

Of importance equal to that of increasing sales returns is decreasing production costs. This coöperative societies have done in two ways: (1) by direct purchasing, and (2) by securing loans to farmers through agricultural credit societies.¹

tions. In 1908 thirty-four Danish coöperative bacon factories, with a total membership of about 93,000 farmers, slaughtered \$1,600,000 worth of hogs to supply a rapidly growing trade. Coöperative poultry associations in Scotland and Ireland have bettered the strain of the stock owned by their members through the procuring of pedigreed breeding animals, through the encouragement of scientific methods, careful management and sanitary precautions. Over 130 coöperative agricultural societies in Bavaria, selling over one-twenty-fifth of the entire Bavarian harvest, have taken definite steps toward increasing the farmers' storage facilities. Warehouses and cold storage facilities have been likewise secured by coöperative activity in the United States as well as in other foreign countries.

A recent coöperative activity of no mean import is the buying and operating of motor trucks in order to give farmers a quicker and more direct route to their markets. Coöperative house-building, banking, insurance, hospitals, convalescent homes, recreation facilities, exhibits and literature are other typical activities of coöperative societies.

¹The advantage to farmers of buying through their own agents was amply illustrated in this country years ago by the operations of the Grange or the Patrons of Husbandry. The Grange appointed state members to buy for individual farmers. The Ohio agency in one year purchased about \$1,000,000 worth of goods. The discounts enjoyed by members varied from 15 to 50 per cent. Reapers which had been previously sold for \$275 were retailed at \$175; thrashing machines were reduced from \$300 to \$200, and wagons from \$150 to \$90. In Iowa the Grangers received a discount of 40 per cent. on sewing machines, 43 per cent. on hay forks, and 25 per cent. on harrows and cultivators. The result of this activity was apparent long after the Patrons of Husbandry ceased to operate on such extensive scales; the retailers offered better prices and implement corporations better service.

Illustrations as to contemporary direct purchasing for farmers

The economic effects of coöperative buying are three-fold: (1) It saves money and thus lowers producing costs; (2) it secures better prices and services from retailers and manufacturers; (3) it opens to the public an avenue for getting facts as to the cost and value of the services of retailers.

In 1911 the value of foodstuffs exported from the United States was \$385,000,000. Yet that enormous total is but 76 per cent. of the amount our farmers that year paid out in interest charges alone. This heavy interest charge represents a burden on production of as serious consequence to the consumer as to the interest-paying farmer. And yet a burden even greater than this interest charge is the difficulty farmers have in getting adequate and proper credit facilities.

Save perchance for land purchases, farmers naturally borrow when interest rates are highest. The farming

are found in the Irish, Danish and English agricultural wholesale societies. By coöperation Danish farmers, through a great central wholesale agency, in 1908, purchased goods valued at \$17,500,000. The commodities so purchased included seeds, fertilizers, machinery and in fact every necessity for the operation of the farm. English coöperative agricultural societies are likewise making extensive savings to English purchasers. The Irish Agricultural Wholesale Society, a federation of numerous local purchasing societies, is able to pay all expenses and effect from 25 to 50 per cent. savings to the farmers on fertilizers and similar goods. It has improved quality as well as lowered prices. "For instance, all the seeds it handles are now guaranteed for purity and germination and with all its artificial manures goes a certified analysis of their contents. All kinds of machines not purchased outright by individuals are sold to the local societies to be hired out to such members as do not need the exclusive use of such an implement. Finally, it has agitated in season and out for cash dealings between the local societies and their members."—"Agricultural Coöperation," Madison, Wis.—Wisconsin State Board of Public Affairs, 1912, pp. 23, 24.

business is preëminently seasonal in character. Funds are needed in the fall and spring. Under our currency and credit system, this means greatest scarcity of cash at just the time when the farmer's need for cash is most urgent, and when interest rates are highest. Not only is the interest rate higher, but the tight money market depresses prices just when the farmer has most need to sell. Moreover, the farmer is not a good competitor for credit. His methods of doing business are often primitive and, because of the diverging interests of city and country, the farmer and the banker have little opportunity to get together and learn each other's needs and worth. This fact also tends to make interest rates higher. The result is as Mr. Leonard G. Robinson has pointed out: "In many of our western states the legal and prevailing rate of interest is twelve per cent., not reckoning the bonus, commission, expenses, and other subterfuges invented by the ingenious money-lender, and designed to circumvent the usury laws or to mollify the public conscience. Conditions in the East are no better. Many instances have been brought to my attention in New York, New Jersey, Connecticut and Massachusetts, where farmers have been paying 25 per cent. and more for accommodations. There are localities not many miles from New York where the farmer cannot obtain a loan on a gilt-edged mortgage because the local savings banks, 'the banks of the people,' find it more convenient to invest in the bonds of the Singapore gas works or to do business with the local real estate operators."¹

Twentieth century farming is essentially a business proposition. Capital is needed and will be increasingly needed. Farming must be done on a more scientific and careful basis. The prosperity of the nineteenth

¹ "Scientific Farming and Scientific Financing." *The Annals of the American Academy of Political and Social Science*, March, 1913.

century farmer was due to the natural increase in farm values, which came inevitably with settlement and the growth of towns and came despite poor farming and business methods. In the first ten years of this century the appraised price of land in the United States increased 118 per cent. It is reckoned that 70 per cent. of our farms are still being held for increased land values rather than as current business-paying propositions. If our farmers are to be owners, not tenants, and if they are to adapt themselves to twentieth century purchasing and selling conditions, new means of credit must be extended to them.

Not interminably will there be virgin soils to exploit. In the West, as in the East and in European countries, attention must be focused on soil conservation and soil efficiency. This requires money. Credit and money are also needed for economic marketing. The "back-to-the-farm" movement should be changed to a "money-for-the-farm" movement; our urgent agricultural need is not for more men on the farm, but for more capital for the farm. To secure this capital new credit agencies are needed.

Of these agencies none has been more potent elsewhere, or has greater possibilities, than the coöperative agricultural credit society. By such agencies for mutual assistance and reliance, each farmer can transmute into needed funds his character, his capacity, his existing capital, his business sense, his ability.

The farmer needs money for two main purposes: to purchase land and provide for permanent improvements; to plant and then to move and market his output. The first requires long-time loans and may be called land credit; the second requires short-time and more personal loans, and may be called agricultural credit.

Land credit is needed in the United States both for

the purchase of new farms, and for the extension of existing farms. Our free land, save some good scenery, is gone. Moreover, the size of the twentieth century farm must be adapted to the automobile truck, not the ox cart; to the binder and the gang plow, not to the grain cradle and the plow with the wooden share.

The oldest credit institution extant seeking to facilitate land credit is the German *Landschaften*. These societies lend not money but credit. They issue bonds to their members in amounts not exceeding two-thirds of the value of the borrower's land. The interest rate rarely exceeds 4 per cent.¹ Under recent Danish legislation, any laborer who has one-tenth the purchase price of a piece of land can borrow the other nine-tenths either from a society bank or from one of the 536 co-operative savings banks. The purchase price is then amortized over a long period. The result has been a rapid increase of independent owners of farm lands.

Of greater regenerating influence than the land-credit societies have been the agricultural credit associations.

¹This low interest rate and freedom in getting credit are due to the vital feature of the system: the nature of the joint guarantee. Originally the first claim of the owner of a delinquent *landschaft* mortgage was against the mortgagor with a second claim against the society. Later "the societies took over direct responsibility for payment of principal and interest, and the tangible security behind the evidence of indebtedness given each investor became an undivided interest in the mortgage-assets in the society's vault. In other words, investors received general lien bonds instead of particular lien mortgages." An important element in the security behind these goods is the collective promise of the landlords to pay them promptly on maturity. This, as other European systems, has made real estate securities so safe, convertible and cosmopolitan, that in Europe they sell as readily as government bonds and thus collect and distribute cheap money for use in the improvement of the soil and development of agriculture."

These associations lend for short terms on personal security. The basis of their credit is faith in the borrower and confidence in community dependability. They capitalize the people's honesty.

The original as well as the model contemporary associations of this type are the Raiffeisen societies of Germany. The principal features of this system are: (1) restriction of membership to people living within such a limited area that they are well acquainted with each other and may keep a mutual watch on the uses made of borrowed funds; (2) gratuitous management; (3) joint and several unlimited liability. The minimum legal number of members for such a society is seven and the average number ninety-two. That is, the groups are kept down so that each member can know well every other member. The only man paid a salary is the treasurer, though the committeemen are sometimes paid when the business is excessive.

The cost of management represents only about eighteen-hundredths of one per cent. of the total transactions. Ninety-two per cent. of the Raiffeisen societies still keep to the principle of unlimited liability. Established in 1849, the growth of these societies, in essence small rural banks, has been nothing short of stupendous. In 1909 the 12,614 local German Raiffeisen societies embraced in the national federation, with a total membership of 1,163,186, loaned a total of \$214,694,794. Their working capital was \$461,089,632. Of this amount 85.2 per cent. were savings deposits by members alone, and only 11 per cent. came from outside stores. Other countries have accomplished similar results.¹

¹ The Crédit Foncier system of France dates from 1894. Both short- and long-time loans are made. State aid is given through placing considerable sums at the disposal of the coöperative

In certain countries the states themselves are advancing loans to farmers. Typical examples of the methods, amounts and profits accruing from such a movement are found in the following facts. From the time of the establishment of the state loan system in New Zealand in 1896 until March 31, 1912, \$60,000,000 on 32,000 applications had been loaned by the government. In the year 1912 alone the total loans were \$10,000,000. The New Zealand statutes do not specify the purposes for which grants shall be given. No advance is made for less than \$125 nor for more than \$15,000. A profit of \$300,000 accrued to the government during the year 1911-12. In Australia¹ money is loaned to farmers on mortgage

banks. Under the law of November 17, 1897, the bank of France must advance to the state without interest a loan of 40,000,000 francs and must make an annual payment of from 2,000,000 to 5,000,000 francs. These sums form the state fund out of which agricultural credit is given. Save for this element of state subsidy, the *crédit foncier* system is practically identical with our building and loan associations. Loans are amortized; that is, in addition to the interest, an amount is charged to pay off the debt when due. These local banks have increased from 309, in 1901, with a membership of 7,998, to 3,338, in 1910, with a membership of 151,621. Their total loans outstanding on December 31, 1910, were about \$10,000,000.

Belgium has its coöperative agricultural rural banks, some 460 in number, whose total loans far exceed \$2,000,000 a year. In Ireland 234 agricultural coöperative credit societies have a loan capital of \$24,000,000 and make annual loans totaling \$300,000. These Irish credit associations borrow at very low rates from outside lenders who are not so familiar with each man's reliability and re-lend to members in small amounts at slightly higher rates, according to the local standing of each member. Forty agricultural coöperative societies in England and Wales in 1910 granted loans to their members. During the year 1909-1910, 3,145 agricultural societies in British India granted to their members loans totaling \$1,761,676.

¹The term of loans differs throughout the various Australian states: In West Australia it is thirty, in Victoria thirty-one and

security. From the introduction of the system in 1894 until 1910, \$35,000,000 was advanced to settlers. Two Canadian provinces, Nova Scotia and New Brunswick, enacted legislation in 1912 authorizing their governments to extend aid to farmers desiring to purchase and improve farm lands. This is the first legislation of this nature in Canada, but it is probable that similar legislation will sooner or later be placed on the statute books of other Canadian provinces.

The principles of both of the coöperative agricultural credit associations and also of state aid have already been adopted on a small scale throughout the United States. Coöperative agricultural credit has been introduced in the United States by the Jewish Agricultural and Industrial Aid Society. The funds of this society, organized in 1900, come from the large fortune bequeathed by Baron de Hirsch. As the society's funds are limited, it does not, as a rule, lend money where other funds can be obtained. Thus it rarely makes first mortgage loans. During the last twelve years it has made 2,178 loans, totaling \$1,256,114. The average loan is for ten years and is around \$500, with an interest charge of 4 per cent.

Eight states, Idaho, Indiana, Iowa, North Dakota, Oklahoma, Oregon, South Dakota and Utah, now permit the investment of school funds in farm credits. Since 1890 the state of Idaho has lent \$1,509,191.33 to farmers; and in the twenty-two years of operation under this system, there have probably been not over six fore-

one-half, in Queensland twenty-five years. Variation also occurs in the purposes for which advances are made. In some of the states a loan is granted for fencing, draining, ring-barking, clearing; in others for the paying off of existing liabilities, while in South Australia no provision is made as to the purposes of state loans.

closures. The amount to one person is limited to \$5,000 and interest at 7 per cent. is charged. In Oregon, from 1857 to October 1, 1910, \$5,078,144.95 was loaned under the state loan system. Interest is charged at six per cent., and not less than \$250 nor more than \$5,000 can be borrowed by any one person. Since 1896 Utah has advanced \$1,089,175.47, of which \$387,239.97 has already been repaid. There is need for encouraging producers' coöperation in the United States. This encouragement and assistance can be secured (1) through self-aid and (2) through governmental coöperation.

Producers' coöperative societies in the United States can now best further their own growth, usefulness and effectiveness by more extensive federation, by centralization of control, and by publicity and education as to the benefits of such coöperative activities. The prerequisite to coöperative success is a community sense and a social spirit. No force is more potent for sustaining weak associations, for educating the public, for giving to all the strength, courage and enthusiasm of numbers than federation.

For governmental aid the first requisite is the passage of laws that will further, not hinder, coöperative organizations. Dr. James Ford in his study of "Coöperation in New England" (1913) finds that "the New England states not only fail to offer special privileges to coöperative associations, but also by their laws and practice undoubtedly hinder the formation and operation of such societies. Connecticut and Massachusetts . . . require a minimum of seven men to found a coöperative society and \$1,000 as minimum capital. They further provide that no member shall hold over \$1,000 in shares, nor have over one vote. There shall be no distribution of profits before at least 10 per cent. of net profits are applied to a sinking fund and until the fund amounts

to a certain percentage of the capital stock—in Massachusetts to 30 per cent., in Connecticut to 20 per cent. These provisions are good as far as they go, but they are severe. 'The \$1,000 minimum capital' provision at once prevents the majority of newly formed societies from incorporating, thus leaving them exposed to serious danger from enemies within and without. The requirement of a 10 per cent. reservation for a sinking fund is wise, though difficult for new societies which desire to justify their existence by large dividends. Further, incorporation itself is expensive, costing in addition to annual taxes, \$25 in Massachusetts and \$30 in Connecticut." A first need is scrutiny and reorganization of our laws as to coöperation.

The people of the United States are probably not yet ready to subsidize producers' coöperation as it has been subsidized in other countries, particularly in France and Bavaria. The latter state has advanced nearly \$238,000 in loans, at about 2 per cent. interest, and \$47,600 in the form of subsidies. Neither are the people of the United States ready to extend governmental aid through loans, as in the eight states mentioned above. But it is now full time for city, state and national market bureaus to further the interests of producers' coöperation by publicity, by information, by coöperation, by encouragement. Wisconsin has already such a bureau in operation.

Such governmental bureaus could encourage the construction of storage warehouses for holding perishable fruits and vegetables; they could encourage proper sorting of farm produce; they could establish a bureau of tests to issue certificates as to the purity and quality of goods sent out by individual farmers or more practically by coöperative associations.

No more significant announcement has been made by

the national Department of Agriculture than its declaration of June 25, 1913, that it would appoint specialists to study coöperative organizations of producers and consumers including coöperative marketing associations of farmers, buyers' coöperative stores, etc. Intensive studies will be made of typical communities, dealing with special products and will assist in the formation of new coöperative enterprises. An expert in coöperative accounting will assist such organizations to keep their books and records effectively, establish cost systems and follow-up methods of handling goods en route and on sale." Coöperating with these specialists will be specialists on marketing perishable produce, on prices, on market conditions, on the market news service dealing with perishable products, on transportation, on rates, on routing and other matters concerned with the speedy and cheap moving of products to centers of wholesale and retail demand.

In several German universities there are specialized courses on coöperation. The universities of Leipzig and Halle pay particular attention to this field. Professor Dr. J. Conrad, in charge of the seminar on coöperation in the latter university, states the purpose of the seminar as follows: "The seminar is maintained before all to afford students in all branches an incitement to interest themselves more closely in the subject of coöperation, so that later in life as ministers of the gospel, teachers, physicians, lawyers, and jurists in various fields they can assist in the extension and development of coöperative organizations. This end is accomplished even if the number of those who undergo a graduation examination (that is, secure a degree) is limited."

Our farmers are tilling their soil, financing their operations and marketing their produce mainly by tradition. These traditions, adequate in the early nineteenth cen-

tury, are obsolete in the twentieth. For their inadequacy and inefficiency, every producer and every consumer daily renders up his tribute in higher living costs. Through virile coöperation among producers, and through the coöperative activity of every agent of government, scientific knowledge can supplement and modernize these traditions to the economic advantage of every resident in the United States.

From the point of view of the city dweller, standardization is the main contribution to be made through producers' coöperation. Happily other forces besides higher profits to farmers through coöperative action are working toward this same end. Chief of these are the large primary produce exchanges and the regulative state bodies created to fix standards as to the weight, quality and purity of each grade of the leading grains and cereals of many states. These forces will first assure state standards, and then, with the assistance of national bureaus, will assure national standards.

CHAPTER XII

WHAT CONSUMERS' COÖPERATION HAS ACCOMPLISHED

Coöperative associations and activities among consumers form another avenue through which living costs may be lowered and living standards raised.

No arguments speak so glowingly of their success as their growth in numbers, in activities and in business. In the United Kingdom in 1910 there were 1,555 consumers' associations, with 2,661,799 members, in the Co-operative Union, a central federated body. As most of these were heads of families, this membership represented one-fourth of the entire population. In 1884 British coöperators numbered about 70,000 a year. In 1912, 99,000 members were added. The share capital of these consumers' societies was, in 1910, \$170,000,000 (£35,072,075), doing a total trade of \$542,000,000 (£111,582,799), with a profit of \$58,000,000 (£12,024,816). Nor do these figures, stupendous as they are, represent the entire coöperative movement in the United Kingdom. In addition to these there were registered under the Industrial and Provident Societies Act of 1893, 2,953 societies, with a membership of 2,679,805, with total funds of \$284,000,000 (£58,482,344). There were 30,065 local coöperative associations in Germany in 1910; 23,520 of these report a membership of 4,471,721 and property valued at \$152,000,000. Such is typical of the way that consumers' coöperative associations have grown in other countries. It is safe to say that the

number of members in such associations in all countries has easily doubled within the last ten years.¹ In the face of such growth and numbers no arguments are necessary to show that coöperation has been tellingly used by consumers in their battle against high living costs.

While there has been no such remarkable growth in the United States yet what growth there has been has been wholesome.

In 1896 there were 70 coöperative stores in the United States with a membership of about 19,000. This number by 1905 had increased to 350, with a total membership of 76,000, a capital investment of \$8,500,000, and an annual principal of about \$265,000,000. In New England alone in 1913 one hundred workingmen's coöperative stores and factories conducted an annual trade of over \$25,000 each.

By consumers' coöperative associations as here described are meant bona fide consumers' coöperative stores organized, financed and operated by consumers. Unhappily for the future success of the movement, many recent activities have been labeled coöperative that are not so in any true sense. As palliatives to public opinion and in lieu of better wages, certain traction and industrial companies have recently organized so-called coöperative stores. These, however, are financed and operated by the company's representatives, and hence are not truly coöperative; even if the employees secure goods at lower costs, such stores will never meet the real purposes and functions of coöperative societies.

¹In France no fewer than 800,000 consumers are in coöperative associations; in Austria, 500,000; in Russia, 300,000; in Italy and in Switzerland, a quarter of a million each. Denmark, Sweden, Belgium and Finland have smaller numbers, although a larger percentage of the population.

The most significant class of consumers' coöperative associations is the society formed by individual shareholding consumers for the joint purchase and for the retail of commodities to themselves, financing and operating coöperative stores for this purpose.

In Great Britain was the origin, and in Great Britain has been the greatest development of this movement. The first coöperative consumers' retail store to be organized on fundamentally coöperative lines was the now famous Rochdale store. This store was founded in 1844 by a few poor weavers in the flannel industry, then out of work and hard pressed. They decided to unite what little capital they had under the following rules:

1. Capital should be of their own providing and bear a fixed rate of interest.

2. Only the purest provisions obtainable should be supplied to members.

3. Honest measures should prevail.

4. Market prices should be charged and no credit given or asked.

5. Profits should be divided in proportion to the total amount of purchases made by each member (with deduction for dividend and education as herein noted).

6. The principle of "one member, one vote" should obtain as well as the equality of the sexes in membership.

7. The management should be in the hands of the officers and a committee elected periodically.

8. A definite percentage of profits should be allotted to education.¹

Those coöperative stores grew apace. In 1909 there were 1,430 such societies, with 2,469,396 members, a share capital of \$150,000,000 (£30,814,878), and profits of \$53,000,000 (£10,851,739). This represents an increase over 1899 of 53 per cent. in the number of members, an increase of 62.7 per cent. in the share capital,

¹ Distributive or Store Coöperation, Wisconsin State Board of Public Affairs, 1912, p. 7.

and of 54.5 per cent. in the profits. One person out of every five in the entire United Kingdom now makes purchases at coöperative stores. These stores have spread to other nations. Thus, in Switzerland, 204 Rochdale stores were in existence in 1905, having a total trade of thirteen and one-half million dollars. In these countries, as in Great Britain, these societies have, as a rule, kept to the original Rochdale regulations as enumerated above. Failures have annually re-taught the value and significance of these pioneer regulations.

The benefits accruing to the members of such co-operative associations are twofold; lower actual costs through good quality and honest measures, and lower money costs through annual dividends.

The Rochdale rules that "only the purest provisions obtainable should be supplied to members" and that "honest measures should prevail" have been carried out in practice through enforcing a third rule that "market prices shall be charged and no credit given or asked." By maintaining the same price as other retail stores in the neighborhood, cut-throat competition is avoided, and the neighboring stores, especially when they find that the members of the coöperative store remain loyal, stop using militant competitive methods. The coöperative store is thus enabled to survive. By refusing credit, consumers do not have to pay each other's debts through higher prices or poorer goods. With profits no longer the whole test of success, managers are stimulated to work up trade by giving honest quantities and reliable qualities. The plan itself takes away the motive to deceive. Consumers, owning and operating the store, are never so dull as to charge themselves dearly for bad goods in order to give themselves larger returns in dividends. It is profits through deceit that make men worship "the devil god shoddy."

That this type of coöperative store does lower costs through reliable qualities and measures has also been proved in a Rochdale store established in 1912 in Montclair, New Jersey. Starting in May with a capital stock of \$6,000 and 200 stockholders, it closed its year with 314 stockholders, a 5 per cent. rebate on the gross amount of purchases made, and a business aggregating \$100,000 in sales for the year. The universal testimony from the members was that there had been goodly savings through better quality and honest measures. In England the establishment of a coöperative bakery at once compelled the near-by bakers to improve the quality of their bread. The indirect savings to consumers through coöperative stores by honest quantities and reliable quality are incalculable in money value.

But such coöperative stores have also back of them millions of dollars in savings expressed in dividends. The trade done by the coöperative societies of Great Britain¹ during the last forty-three years totaled nearly seven billion dollars; their profits \$750,000,000. Dividends to consumers now total \$50,000,000 annually. These money savings, added to the economies through honest quality and quantity, represent lower living costs of telling significance.

The dividend, to be sure, is usually spent when paid; yet it is sometimes left to draw interest and to be added

¹ Shares in these coöperative retail stores are of the nominal value of £1, and may be paid in full on allotment or by instalments, usually of 3d. per week per share. In large societies the only cash payment required is 1s., the balance being paid by the profits to which the member is from time to time entitled and which are credited to his share account. The average dividend ranges from 2s. 3d. to 2s. 7d. on the £. As the store becomes able to dominate prices in its community, the pressure has been to lower prices in order to benefit the poorer classes most directly. Dividends have consequently been lower.

to the share accounts. Instances are numerous where many members utilize this investment as reserve and allow it to accumulate in order to pay the premium of apprenticeship or to pay college fees or for reserve for the support of old age. Thus money saved by coöperative action is put into better living standards as well as representing lower living costs.

Since lower operating costs mean higher dividends, members coöperate to lower delivery costs. Thus in most city societies an agent calls at members' homes at stated intervals to receive orders, say semi-weekly or bi-weekly, and these orders are delivered. During the intervals between such deliveries, the members take home their purchases themselves.

Closely allied to such coöperative activities in the United States is the less pretentious association of consumers for the purpose of buying in large quantities. When bought by the bushel coal costs several times what it costs by the ton. Buying beans by the bushel basket, potatoes by the barrel, meat by the carcass, etc., is all within the possibilities of almost any group of urban purchasers. Housewives in numerous cities in this country have recently combined to make such purchases, to the definite economy of everyone concerned. One obstacle to coöperative buying in the United States has been the more or less itinerant character of the city dwellers. In European cities families know each other for generations. But urban populations will grow more static in the United States and American life will be less full of dreams and more replete with constructive plans. Coöperative buying will then have an ever-larger place.

Two tendencies among wholesalers and other middlemen tend to minimize the advantages accruing to consumers through coöperative stores. At first, other re-

tailers tried to entice or coerce wholesalers and jobbers to make higher prices to coöperative stores. And then, after coöperative stores had definitely established themselves and wholesalers found it necessary to sell to them anyway, many big middlemen and manufacturers raised their prices to coöperative stores on the theory often openly voiced that "coöperators can stand the increase." Consumers' dividends were thus dissipated into middlemen's profits. The result was a demand for "a coöperative source of supply." Out of this demand have grown in the United Kingdom alone two great wholesale societies, the English Coöperative Wholesale Society, Ltd., and the Scottish Wholesale Coöperative Society.

Both of these societies are federations of retail associations. Their prime purpose is to enable the retail stores to buy more advantageously. To this end their by-laws empower them to "carry on the trades or businesses of wholesale dealers, bankers, shippers, carriers, manufacturers, merchants, cultivators of land, workers of mines and insurers of persons and property."

The Coöperative Wholesale Society of England was founded in Manchester in 1864 with a capital of £2,400. In 1899 its capital was £2,829,501, and its annual sales £14,212,375; ten years later the capital was £6,161,316 and the sales £25,675,938. Its total net sales in 1912 amounted to £26,000,000. The Scottish Wholesale Society, organized in 1869, had a capital by 1899 of £1,457,645 and a sales business of £5,014,189; ten years later the capital was £3,346,873, and the sales £7,457,136. The total sales of the English Wholesale Society in forty-eight years, from 1864 to 1911, were £438,824,630, from which a profit had accrued to members in dividends of \$36,000,000 (£7,206,076). The profits of the Society, during the first ten years of the century, rose

from \$1,441,000 to \$2,314,350. The profits for 1911 reached the sum of nearly \$2,900,000, this being 2.07 per cent. of the turnover. In December, 1912, this society returned to its constituent societies \$1,100,000 as their share of the \$1,600,000 in profits made during the preceding half-year alone. The half-million and more dollars remaining was retained for extending the enterprises.

The amounts and character of the business of these two societies are both large and varied. Their agents are in every part of the British Isles, and of the entire world. So far as possible, they buy directly from producers, whether the article be the product of the factory, the farm, the forest, or the mine. The importations into England by the English Wholesale Society alone in 1909 totaled thirty-five million dollars and originated in almost all parts of the globe. Moreover, the two wholesale societies have also become very extensive manufacturers' associations. Their banking and insurance operations are also extensive and they serve as the financial agent of most of the retail societies. The English Wholesale Society to-day boasts the four biggest flour mills and the biggest boot and shoe factory in Great Britain. The Scottish Coöperative Wholesale Society has one industrial center at Shieldhall that employs 8,000 workers. The business premises of the English Wholesale Society are extremely varied in nature, including almost every conceivable kind of manufacturing establishment. The bacon factory has been used seven years. In the boot and shoe works at Leicester 50,000 pairs of shoes are made weekly. As many as 250 varieties of biscuits are prepared by the biscuit works, the output of which in 1911 was £207,694. Other departments under the Coöperative Wholesale Society are the grocery department, the cabinet

factory, the clothing factory, the printing works, preserve works, vinegar brewery, flour mills, flannel factory.

Both the English and the Scottish coöperative societies derive their capital from local coöperative societies. The two societies render every assistance to each other, and in certain departments have joint buyers and depots. In 1902 they established a local limited partnership under the title of "Joint Committee of English and Scottish Wholesale Societies." Under this joint control certain businesses are now carried on, including the owning and working of tea estates in Ceylon, the manufacture of cocoa at Luton, and the blending and packing of tea in London. They are in essence, that is, one large industrial activity. Their total sales in forty-nine years, ending in 1910, were £2,187,388,929; and total profits £209,027,417.

The local coöperative stores buy from 50 to nearly 100 per cent. of their total purchases from these wholesale societies; many purchasing as high as 90 to 95 per cent., the average being not far from 75 per cent. Some of the local societies maintain their own shops, factories and farms, and thus produce the articles which they dispense. They also make special efforts to buy directly from producers' coöperative societies, when possible, thus coördinating, as do the wholesale societies, producers' and consumers' coöperative activities. It is this interbuying and close interrelationship that extend dividends and make for economies and savings in reliable quality and honest quantities.

The space which can be here given to such coöperative activities necessitates that attention be focused upon the British associations as types of what has been and can be accomplished. This subject cannot be left, however, without some reference to the development of

wholesale societies elsewhere. The French society was organized in 1892. By 1895 it had a turnover of 9,143,129 francs (\$1,764,623.89), representing a net profit of 110,039 fr. (\$21,237.52). The total trade done by all European wholesale societies amounted, in 1900, to one hundred and twenty-five million dollars; in 1910 it reached over two hundred and twenty-five millions. In 1911 the total exceeded two hundred and fifty million dollars. In 1899 the Pacific Coast Coöperative Union, one of the most flourishing examples of coöperative wholesale societies in the United States, was organized in California. This company is owned and controlled by the individual retail coöperative stores scattered throughout Washington, California and Idaho. In 1905 it had a paid-up capital stock of \$62,000, and yearly sales of \$335,000. Its earnings, other than those required to pay interest upon capital stock, are divided among the stockholding stores in proportion to the amount of their purchases. In 1902 there were outside of Great Britain a dozen wholesale societies; in 1911 there were seventeen reporting an annual business of nearly a quarter of a billion dollars. This was an increase of \$18,500 over the profits of the previous year. No wholesale society showed a decrease, while some almost doubled. In Germany, third in importance, the increase was 24 per cent.; in Hungary, 25 per cent.; in France, 40 per cent.; in Belgium, 41 per cent.; in Bohemia, 58 per cent.; in Russia, 82 per cent. To-day there are no fewer than twenty national wholesale societies in as many different countries.

It would be difficult indeed to overestimate the savings and significance of these undertakings. Profits and dividends, reliable qualities, honest weights and measures, all combine to mark the movement as the most significant economic movement of the twentieth century. No

other movement is more freighted with possibilities for better living at lower living costs.

Space forbids any detailed discussion of other types of consumers' coöperation. Passing mention must be made, however, of the accomplishments of building and loan associations in the United States, of coöperative housing schemes in Great Britain, and of coöperative loans to town dwellers in Germany. The United States League of Local Building and Loan Associations, at their annual meeting in 1912, reported, for the year 1911-1912, 6,099 building and loan associations in twenty-seven states, with a total membership of 2,332,829 and with total assets of \$1,030,687,031. From the returns published by the Coöperative Union in 1902 it appears that 334 coöperative societies in Great Britain have built 37,267 houses for their members, at a cost of £8,127,155. "Of these houses 29,020 have been purchased and are now owned by the members, and 8,247 remain the property of the societies, and are rented to the members who occupy them. There are thousands of cases where members who, in their wildest dreams, could never have hoped to own their own house, are now dwelling in their own property through the help given to them by co-operation." In Germany the Raiffeisen system of agricultural credit has been adapted to the needs of town dwellers under the name of the Schulze-Delitzsch system. Under this system of coöperation loans were granted to town dwellers totaling \$600,000,000 in 1901, and \$1,000,000,000 in 1910.

Of as great importance for the future as the economic results of consumers' coöperation are its social results. Not the least important of these social results is the development of a feeling of solidarity and a spirit of other-helpfulness. Upon the inculcation of this spirit as a supplement to and a corrective of an ultra-

individualistic self-aggrandizing spirit, rests largely the hope of lower living costs for the future. Under twentieth century social and economic conditions an increasing number of activities can be done cheaply and efficiently only by coöperative action. The aggressively selfish must give way to the aggressively social. Another social result of such coöperative activities is the development of capable leaders with a capacity to see over the clasp of their pocketbooks into the richer returns of public service. No factor of greater influence for good has come from the coöperative movement than the development from the ranks of leaders of sagacity and social honesty. The latent powers of the socially diffident, faculties otherwise wasted for lack of outlook and opportunity for expression, the choked-up desires of men have, through coöperation, become a social asset of wealth inestimable.

A prerequisite in looking about for means for extending the fields, activities and results of consumers' co-operation is the study of the cause of failures. One reason for the failure of the Grange movement was no doubt peculiar to that movement, and that is the want of solidarity in class feeling among American farmers, their ultra-individualistic spirit and the fact that they look for profits in the increase of land values rather than in lower production costs and better marketing facilities. There were other reasons for the failure of the Grange: the want of wholesale houses from which their retail stores could obtain their supplies; the development of the five-and-ten-cent store; the department store and the mail-order houses; the limited capital available to the Grange, and the astounding growth of the movement before leaders of business sagacity and knowledge could be developed.

The more general reasons for coöperative failures have

been summarized by Dr. Ford, in his "Coöperation in New England," as: "Bad management, extended credit, dishonesty, ignorance of business, small capital, and, most of all, ignorance and disloyalty of members." He then goes on to say that "close examination shows that these causes may be reduced to two, of which all others are but phases—bad management and lack of coöperation."

Constructive and remedial measures for extending the work and results of consumers' coöperation may, therefore, be grouped about the two heads—securing better management and developing a better coöperative spirit.

The basic errors in management, such as ill-chosen location, ill-composed membership, tactless, dishonest, self-centered business methods, are to be overcome primarily by the development of coöperative literature and high coöperative standards, disseminated and enforced by powerful federations of all consumers' societies. A second means for securing better management is the establishment of schools by coöperative societies in which their managers and employees may be trained in high-class business methods. Coöperation will find, especially in the universities offering high-grade commercial, financial, business and economic courses, a field of no little power in securing the training essential to business success. And finally, state and national governments can send out specialists to give instruction, to supervise accounts, to give advice as to proper methods and means for securing results.

To secure a higher spirit of coöperation is indeed as difficult a task as to secure a higher grade of business management. Our individualistic nineteenth century point of view must be reshaped to include a larger portion of community and group action. This can be and

is being furthered by the publishing of coöperative journals and literature.

A more direct and powerful means for developing a truly coöperative spirit, however, is the federation of all coöperative concerns in a central organization. This federated organization can then do away with the numerous disadvantages that necessarily come to the isolated coöperative concern; it can give the protection, offensive and defensive, that every such new concern must have to succeed, for the greater its success, the greater the opposition it will meet. It can, moreover, take the offense, and, by publicity, reveal to a sympathetic public the untoward measures being taken to undermine the success of such coöperative concerns.

A type of such a federation already exists in the British Coöperative Union. The scope of the Union's activities is indicated by the appended lists of its committees and their functions.¹ By maintaining an information bureau, with data as to methods, laws and accounting systems, by providing correspondence and other courses of study for the training of employees and managers, by

¹"(1) Office Committee, Executive; (2) Finance Sub-committee, to check accounts and control expenditure; (3) Educational Committee, to promote classes in the sciences, in book-keeping, in coöperation, and to provide lecturers, scholarships and diplomas; (4) Productive Committee, to advise and aid productive associations; (5) Parliamentary Committee, to watch legislation and protect coöperative interests in Parliament; (6) Committee of Trade-Unionists and Coöperators, to settle disputes and maintain cordial relations between the coöperative and trade union movements; (7) Exhibitions Committee, to organize and control exhibitions of coöperative activities; (8) Propaganda Committee, to help in the establishment of new societies or branches of existing stores and to aid struggling associations with advice and loans; (9) International Coöperative Alliance, to attend foreign coöperative congresses, and report on foreign methods."—Ford: "Coöperation in New England," p. 9.

giving competitive examinations for promotions, by publishing a journal, by having a responsible, efficient spokesman for the entire coöperative movement, by offensive and defensive protection, this central union has power of no small significance.

The Right Relationship League is already endeavoring to perform in this country corresponding functions for coöperative stores. This league, which in 1906 supervised but six stores, in 1912 had organized and furthered the work of 150 stores in seven states. These stores have a membership of about 10,000 and an annual business of about \$5,000,000. The work of this league consists in persuading people that coöperation is sound and profitable, and in helping to organize and manage such stores.

With these steps to secure better management and to inculcate a spirit of true loyalty, coöperative societies and activities of various kinds are certain to multiply throughout the United States.

Coöperative associations will thus become an ever more potent factor in better living at lower costs.

CHAPTER XIII

A CITY PROGRAM FOR LOWER FOOD COSTS

Existing food distributing agencies have evolved as private profit dictated. No united civic action, no community program has even attempted to correlate them into a unified, efficient whole. The melding of these private agencies into a working unit is a prime essential to the elimination of needless duplication and waste. This is, therefore, the basic part of a constructive city program for minimum living costs.

The weakest point in our national transportation system is the lack of a proper coördination of water and steam routes. Our waterways are important, not only as competitors for rail lines in securing lower rates and better service, but also in order to keep open to our city markets the agricultural and producing sections more readily accessible to water routes. Our national government has spent millions in the development of water channels. But channels alone do not mean that boats are plying upon them. Of as great importance as the channel itself are adequate water terminal facilities. But our water terminals are inadequate, our harbors ineffectively organized. For greater national efficiency and for lower distribution costs, civic attention must be focused more and more upon cheap, efficient water terminal facilities, free from the domination of interested and competing concerns.

There are indications in several cities that control over water facilities is increasing. Since 1910 a number

of cities, such as New York and Trenton, have increased their control and ownership over their frontage. Much yet remains to be done, however, to give our big distribution centers with water terminals free, well correlated and efficient distributing systems. For any inefficiency, waste or duplication in these systems, the consumer pays in higher prices.

Of as vital importance as control of water frontage is the way this frontage is equipped, supervised and controlled. Terminal efficiency determines the efficiency of the carrier. Terminals must be equipped with wharves. Water-front warehouses, at present inadequate save at a few important ports, and cold storage facilities, are likewise essential in order that outgoing local freight may be assembled in quantities sufficient for cargo loads, and that incoming freight may be assorted for local distribution. For the transshipment of freight between rail and water lines, transshipping machinery and appliances are essential. These, as a rule, are wholly inadequate in American cities.¹ Such transshipping machinery and appliances are characteristic of German cities. Dr. Howe, in his recent book on "European Cities at Work," says of German harbors: "The harbor and the docks are owned by the city and are equipped with railway tracks, warehouses and wharves to facilitate the handling of vast quantities of freight in the most economic and speedy way possible. This is characteristic of Ger-

¹To be sure, there has been in the United States an increased interest in municipal ownership of docks, wharves and landings. The value of municipal docks, wharves and landings increased from eighty-four million (\$83,857,499) in 1906 to one hundred and twenty-four million (\$123,826,580) in 1910, while receipts increased from four million (\$3,832,840) to six million (\$5,901,488), the payments for expenses being but \$2,156,696 and \$2,952,151 respectively. But these totals represent activity on the part of but few cities.

man harbors. The docks and warehouses and machinery for transshipping freight from vessel to vessel, or from water to land, are all under public control and are operated as a unit."

To assure terminal efficiency, the Director of Wharves and Docks must be an official of wide, clear vision, giving favors to none, and facilities and reasonable rates to all. This supervision, the regulations as to landing, the prevention of discrimination among rail and water, or steam and gasoline, or through and local boats, are all vital factors in a well coördinated urban distributing center.

Many German cities could be cited as examples of just such distributing centers. Thus Hamburg, with fewer natural advantages than Boston, New York, and many other seaport towns in America, has developed its opportunities until it has become the greatest seaport on the continent of Europe. The wharves and docks of the city are municipally owned, and every possible means utilized for the economic and speedy handling of vast quantities of freight.

For the coördination, not only of water and rail transportation agencies, but also of all local industries, factories, and distributing houses, there is needed a city-owned and controlled belt line railroad. In 1910 but seven American cities had anything approaching a general belt railroad and the trackage in these seven ports totaled but twenty-nine miles, serving directly about fifty wharves.

New Orleans is one of the ports with such a belt line. The Public Belt Railroad Commission was created in that city in 1904. Work on the belt line was begun in 1905. By 1910 about ten miles of track had been completed, connecting the water front and railroads with all the principal industries. This line, together with the great extent of public ownership of water fronts and

wharves, gives to the Crescent City "the most perfect terminal coördination in this country."

"To make it impossible for any individual or corporation to monopolize railway access to the water front," the Philadelphia Belt Line Railroad Company was organized in 1889. "On April 2, 1913," writes the president of this company, "the belt line operated about six miles of track on the Delaware River front, on which it handles cars for the Philadelphia & Reading Railway Company and the Baltimore & Ohio Railroad Company." This is but one-third of the mileage provided for by the franchise. Two months after this statement was written the city happily completed negotiations looking toward the extension and greater use of this line. It will now be possible for Philadelphia to follow out the more modern city plans worked out in German cities. An industrial freight railway has also been suggested for the Borough of the Bronx in New York City. This line is to circumnavigate the borough along the water's edge, and connect the railroads coming into the Bronx with the docks and factories. A freight car can then be transferred from one railroad line to another, or to any steamship, or to any warehouse or receiving center. In Germany, the terminals and railway connections are built with switches, sidings and spurs, which are linked up with the canals and waterways, to insure the economical handling of freight. The savings, economies and facilities in food distribution through such belt lines are and will increasingly be of great importance.

The coördination of the agencies by which food is brought to the city from every land and from every part of our own nation is highly important to the welfare of urban and rural dweller alike; of like value is the coördination of all the agencies used in getting country

produce from, and urban products out to, the surrounding agricultural community.

In the large cities great railroad terminals crowd the local traffic out into the less profitable centers. Good organization will give to small truck boats and to freight and trolley cars loaded in the surrounding country ready and facile access to the city's market center. In cities with good urban trolley lines, trolley terminals could be placed at all the leading market sections of the city, thus encouraging small truck shipments. Just this sort of a terminal has been planned by Pittsburgh, to which produce may be brought by truck boat and trolley car alike. Good direct roads render tributary to such centers the farming country tapped by wagon and motor truck.

The coördination of food distributing agencies requires a city planned for social needs. City planning, the second element in a constructive city program for lower living costs, means that, to live well and happily, there must be coöperative effort and coöperative spending, and this for no other reason than because we are now living in masses and not, as in the nineteenth century, on isolated farms. City planning protects against the waste of an uncoördinated distributing system paid for many times over from the small but never ceasing contributions of every purchaser in the land. A proper city plan devises transportation facilities that decentralize cities, thereby making living more wholesome, and that centralize business, thereby making living costs less. In a city planned for minimum distribution costs: (1) the main depots will be so located as to be efficiently related to rail and water lines; (2) steam and rail lines will be coördinated by publicly owned and controlled water terminal facilities in a harbor efficiently organized; (3) like attention will be given to good through roads, to local water routes and to trolley lines, that local freight

may be sent to the section of the city where it is wanted; (4) a public belt line railway, if needed, will coördinate transporting, manufacturing and distributing agencies; (5) the main centers of distribution will be connected by a convenient and orderly location of streets. Lower food costs, higher wages, better standards, better citizens, await an efficient coördination of transportation and distribution facilities, await a city planned to live in, not merely to work in.

Each city, state and nation has its own problem in securing an efficient, well coördinated distribution system. The problem is such as to demand careful study. The defects in the present system of distribution can best be eradicated by wise publicity as to wholesale and retail conditions. This study and this publicity can best be made through national, state and city market bureaus. The distribution problems peculiar to each city, each state, and the nation can then be studied by specialists, and a more efficient and less costly system of distribution can slowly be worked out that will mean lower costs to the farmer, the manufacturer, the producer everywhere, and lower living costs to all. Through these market bureaus the producer and the consumer, whether individually or through coöperative associations, can be brought ever more closely together. Through such market bureaus, needless costs may be eliminated, and the information secured essential to sane, constructive action toward lowering living costs. The establishment of such market bureaus is the third big element in an adequate city program for minimum food costs.

The farmer wants all he can get for his products. The consumer wants all the produce he can get for the least money. A city market bureau can very definitely further the interests of both the farmer and the consumer and thus administer to the needs of nine out of every

ten of our population. When the farmer in the country comes to study the marketing problem, he will learn that he is practically helpless on account of distance. None of his questions can he answer; none of his measures can be adopted within the city. European countries and cities have thought it wise to make it possible for the farmer to get public moneys in order to buy lands. European countries have lent definite assistance through farmers' coöperative societies and individual farmers as well. The American city, quite in contrast to these, has done nothing.

The question as to what a municipal market bureau can do can be answered in large part by reference to the author's letter files. One man writes from Illinois that he would like to market butter by way of the parcels post, and wants assistance for finding consumers in Philadelphia. Another farmer wishes to learn of a good market stall where he can sell his goods most advantageously to consumers. Another would like to be recommended to a reliable wholesale dealer or jobber. Still another feels he can by the hamper method get in direct touch with many consumers if he can but get a list of interested city dwellers. Another writes that his freight rates are exorbitant and unfair. Still another holds that the freighting facilities offered at his station are wholly inadequate. Another finds need for the completion of a certain street within the city, in order to have a thoroughfare from country to city. One farmers' coöperative association asks whether or not facilities could be made so that one of their boats could leave the New Jersey shore and find ample marketing facilities in Philadelphia. These are but types of the questions that have come to the author's own desk, which a city farm bureau, and a city farm bureau only, with thoroughgoing information, could properly and adequately answer. The

county agents, producers' coöperative societies, farmers themselves, are relatively helpless, after all, when it comes to finding newer and better channels for marketing produce.

The consumer, likewise, has no means of knowing what the farmers are doing and what the farmers would like to do. No retail bulletins are issued in this country, as in European countries, stating to farmers what retail prices are. Farmers have scant information as to what consumers are paying for their produce, and consumers have not the slightest notion as to what farmers are receiving for their goods. Such a market bureau could stimulate the formation of farm bureaus in outlying counties, could render assistance to farmers in sorting and packing their goods so as to fit them to the particular needs of their own market.

Such a market bureau could assist wholesalers, jobbers and retailers to get the facilities and services needed for an efficient prosecution of their business. Retailers can be informed of market conditions and farmers' prices. During the spring of 1914, the Wharton School of the University of Pennsylvania and the Department of Public Works in the City of Philadelphia joined in a Retail Merchants' Week, for the assistance primarily of the small outlying retailer. The way to city efficiency lies through business efficiency, and constructive assistance to business men, which a live urban market bureau could render.

Our cities have been expecting their residents to "grow up on the range," as it were. They have done little to assure proper foods at minimum costs. It is hoped that the above pages have pointed out that there is much for the city to do. The growing of social consciousness gives fair promise that collective action will soon supplant the

waste and inadequacy of the present facilities for food distribution with constructive measures that will mold existing facilities into a more efficient whole and will assure minimum food costs to the future urban earner.

PART III

OTHER URBAN LIVING COSTS

CHAPTER XIV

PRODUCTIVITY THROUGH HEALTH CONSERVATION

Preventable ill-health and disease cost the people of the United States the enormous total of over two billion dollars per year.

On the basis used by Professor Fisher, in his "Report on National Vitality" (p. 119), the unnecessary loss of capitalized net earnings in our present population of 92,000,000, with its 693,000 preventable and postponable deaths per year, is \$1,180,000,000.¹

If the loss per preventable or postponable death be estimated at around \$2,000—the amount fixed by the International Congress in 1907 was \$3,820—the total loss in capitalized net earnings is considerably over one and a half billion dollars. An annual loss, therefore, to the

¹Prof. Fisher estimated that the national annual unnecessary loss of capitalized net earnings due to deaths, postponable or preventable, in 1907, was one billion dollars. This total sum was based on a death rate of 18 per 1,000, in an estimated population for 1907 of 85,500,000, an annual death rate, that is, of 1,500,000 per year. Of these 1,500,000 deaths, 42 per cent., or 630,000, were preventable or postponable. Since the postponement of the death saves on the average \$1,700 in capitalized net earnings, the annual national, unnecessary loss was 630,000 times 1,700 or \$1,071,000,000.

social income, due to deaths postponable or preventable, of one and one-quarter billion dollars is a conservative estimate. The minimum annual loss of earnings due to preventable sickness is now probably over \$550,000,000 per annum.¹

Probably \$700,000,000 is a conservative estimate of the annual loss due to caring for the sick and dying in the United States. Using Professor Fisher's estimate that the total bill for caring for illness and death in each family is \$27 per year, our total annual expenditure for the 20,255,555 families in the United States, for caring for illness and death, is over \$540,000,000 per annum.² But \$27, however, is the minimum expended in workingmen's families. The average in all families is probably

¹ This estimate, by Prof. Fisher, is on the basis that there are only 3,000,000 sick people in the United States. He assumes, since sickness increases with senility, that only one-third, or 1,000,000, of these were in the working period of life. Assuming that the annual earnings are \$700, and assuming that one-fourth of the 1,000,000 had no employment—a maximum percentage surely—the total loss was 750,000 times 700, or \$525,000,000. On the basis of a population of 92,000,000, in lieu of Prof. Fisher's estimate of 85,500,000 for 1907, there are in the United States to-day 3,250,000 sick people, of whom three-fourths lose work at \$700 per year, making a total annual loss of 810,000 times 700, or \$567,000,000. According to "Occupational Diseases," Thompson, p. 10 (1914), the First National Conference on Industrial Diseases, held in Chicago in 1910, adapting to the United States the sickness insurance of the German industrial population, sent a memorial to the President calling for controlling legislation and estimating that there were in this country in 1910 13,400,000 cases of sickness among the 33,500,000 men, women and children engaged in gainful occupations in the United States, representing 284,750,000 days of sickness and \$366,107,145 loss in wages.

² Prof. Fisher's estimate in "National Vitality," p. 119, was based on 17,000,000 families, thus giving him a total loss of \$460,000,000 per year.

twice this sum.¹ On this basis the total annual cost of caring for the sick, a large proportion of whose sickness is preventable, and of caring for the dying, 42 per cent. of which is annually preventable, or postponable, is nearly \$1,000,000,000. Indeed, if the cost of medical attendance is figured at \$1.50 per day, the minimum annual loss of 3,000,000 sick people is \$1,500,000,000. If half of this sum is due to preventable illness or postponable deaths the annual loss is around \$700,000,000 per year.

The total amount which preventable illness and postponable deaths annually costs the United States is, therefore, made up of the following items: loss in capitalized net earnings, \$1,250,000,000; loss in current earnings, \$550,000,000; medical attention and nursing, \$700,000,000—a total of \$2,500,000,000.

Another way of getting at our national loss through ill-health and preventable deaths is to estimate the losses due to preventable diseases. While not all these can be itemized here, a sufficient number can, to show that the total losses, as judged by these estimates, total more than the two and a half billion dollars estimated above. The gross loss of earnings by illness and of potential earnings cut off by death due to tuberculosis is over one billion dollars annually, \$440,000,000 of which is loss to others than the sick.² The monetary loss due to diseases carried or given by insects is \$200,000,000 annually, half

¹ The average annual expenditure for medicine and doctor in 35 families (14 Fall River cotton mill families and 21 Southern cotton mill families) was \$31.—“Report on Condition of Woman and Child Wage-Earners in the United States,” Vol. XVI., pp. 37-127, 188-227.

² In New York State alone the loss due to deaths from tuberculosis, the cause of one-ninth of the deaths in the state, was \$64,000,000. (This was based on the average money loss per death of \$3,828, the sum fixed by the International Congress in

of which is to be accredited to malaria; the monetary loss due to the yellow fever epidemic of 1878 alone was \$100,000,000; the small-pox epidemic of 1871-72 in Philadelphia caused a loss of \$22,000,000. The hookworm disease costs South Carolina alone \$30,000,000 per year, and one-half of the Southern children were found to have this disease.¹

The disease seems to be very prevalent among cotton mill laborers in the South, where hookworm-bearing laborers are worth but seventy-five cents per day, as compared with \$1.50 earned by the average mill laborer.² The efficiency of the worker with this disease is not more than 33 per cent. of his natural efficiency.

It is clearly seen that if such is the loss from a few of the major preventable diseases the totals from all of the preventable diseases and postponable deaths will easily go over the sum estimated above.

But the loss in death and in sickness is but slight compared with the loss due to lowered vitality and to inertia. If it were possible to translate into later earning power the losses in ambition, in learning, and in the grasp of all that the schoolroom or playground can give, due to preventable children's diseases and ailments, the total would mount up into figures quite past belief. Of the 275,641 school children given physical examina-

1907.) Dr. Allen, in "Civics and Health," p. 245, says: "The annual cost of tuberculosis to New York City is established at \$23,000,000 and to the United States at \$330,000,000."

¹In 1904 some 90 out of every 100 of the working population of Porto Rico had the hook-worm disease. In Colombia, South America, 90 per cent. of the people living between sea level and the 3,000 foot level were suffering from this same affliction. Fifty per cent. of the people in British Guiana and not less than 1,800,000 of those of India, while in Southern China three out of every four people, are sufferers from the same disease.

²Fisher: "Report on National Vitality," p. 122.

tions in the Borough of Manhattan from 1905-1907, 15.8 per cent. were laboring under the serious handicap imposed by obstructions to nasal breathing, 16.9 per cent. more were afflicted with posterior nasal growths, while 21.2 per cent. and 1.2 per cent., respectively, were defective in vision and hearing. Only 2.5 per cent. were found to be defective mentally. A decade ago almost all of these children found to be physically defective (55.1 per cent.) would have been classed as mentally slow, and most of them would have been allowed to become backward in their grades, with the resultant loss in interest and in educational effectiveness known to all educators.

Nor is this all. The break-up of families and the diminished family budgets resulting from preventable illness and postponable deaths entail heavy drainage on our annual social income. The full working power of every individual can well be maintained until sixty years of age. Making this standard a working fact would alone vastly increase the productivity of our cities.

There is another item in health costs of deep social significance, and that is the vast sum of money spent annually for sick and life insurance. These sums—in so far as they constitute gambling by the insured as to when death will take place, and to that extent they cannot be counted as investments—can certainly be diminished. The total premium income of the 256 life insurance companies in the United States was for 1912 alone, \$673,014,129, an increase of \$266,067,532 over 1902, while the total income to these companies for that same year was \$893,391,717, an increase of \$388,864,012 over 1902.¹ Into the 72 mutual accident associations in the United States was paid in 1912 \$6,419,331, an increase of

¹ Insurance Year Book, 1913.

\$5,308,099 over 1901, when the premiums were \$1,111,232.

To be sure, it probably would not be sound to consider even a small percentage of these sums as losses, but as investments they can certainly be made more secure while, with lowered mortality, rates can certainly be lowered. Life insurance rates have thus far not been lowered for all classes, for the reason that, while the general death rate of the nation—indeed of the world as a whole—has been lowered, this lower death rate has been essentially among infants and in slums, in neither of which class is there any extensive insurance. But, when preventive medicine and community action lower the mortality rates among the classes that do insure, and this includes a large percentage of working people, there can and should be definite savings in the rate of insurance paid.

Now the significant fact about the diseases causing the greatest loss of life and productive power is that they are preventable. Most of them, indeed, can be stamped out in their entirety. The whole attitude toward health conservation and governmental functions pertaining thereto has been changed by the discoveries of Pasteur, von Pettenkofer and Kock that germs and bacteria are the cause of disease. Edward Jenner's discovery in 1798 of a vaccine that would prevent small-pox has made epidemics of that disease a social crime. The discovery of an antitoxin for diphtheria in 1894 robbed that former scourge of its terrors. Knowledge of the source of typhoid fever has made the prevalence of that disease, the annual loss from which in the United States was formerly \$350,000,000, an evidence of criminal neglect on the part of public authorities as to the purity of the community's water, milk and food. In New York City the death rate from typhoid was but 12 per 100,000

population in 1908; in Berlin, it was but 3; in London, 5; in Stockholm, 2. Typhoid fever is already largely limited to rural communities where sanitary and precautionary measures are inadequate.¹ Now in recent years the vaccine for typhoid, less harmful in its effects, it appears, than the vaccine for small-pox, promises immunity from typhoid for a period of at least two or three years.

Philadelphia reduced her death rate from tuberculosis 12 per cent. in the one year, 1911-1912. While 2,606 Philadelphians died of tuberculosis in 1913, the number of deaths due to this cause, had the rate of 1880 prevailed, would have been 5,890, and each death from tuberculosis usually means more than a year of invalidity. The death rate from pulmonary tuberculosis in Munich was 2.3 in 1908, as compared with 6.1 in 1871. The most important factor for the prevention of tuberculosis is the hospital for advanced cases. Better dispensary

¹ Dr. Whipple in his book on Typhoid Fever cites the following table showing the extent to which typhoid prevails in rural communities as distinct from the average death rate for the entire state.

TYPHOID A RURAL DISEASE

	Average Per Cent. of Rural Population	Average Ty- phoid Fever Death Rate per 100,000
Five states in which the urban population was more than 60 per cent. of the total.....	30	25
Six states in which the urban population was between 40 per cent. and 60 per cent.....	49	42
Seven states in which the urban population was between 30 per cent. and 40 per cent.....	67	38
Eight states in which the urban population was between 20 per cent. and 30 per cent.....	75	46
Twelve states in which the urban population was between 10 per cent. and 20 per cent.....	87	62
Twelve states in which the urban population was between 0 and 10 per cent.....	95	67

Prepared by Dr. John S. Fulton, secretary of the state board of health, Maryland, and quoted by Dr. George C. Whipple in Typhoid Fever.—Allen: "Civics and Health," p. 13.

facilities, open-air schools, better ventilated homes and workshops and general elevation of the standard of living are all uniting to stamp out this scourge.

The discovery that insects are the source of certain diseases, such as malaria and yellow fever, is making way for the elimination of the \$200,000,000 loss due to insect diseases. The hook-worm disease, with its heavy loss, can be eradicated at a cost of 15 to 25 cents per individual. The discovery that the bubonic plague was due to the rat flea has made it possible to eliminate, in its entirety, that disease, formerly a scourge in so many communities. In Philadelphia the mortality from pneumonia was reduced 19 per cent. in 1912 over 1911.

Enough of these facts have been cited to recall effectively the rapidity with which our communities and our cities particularly are learning to handle diseases so as to prevent their heavy toll in death and illness and incapacity. Indeed, the death rate is already more than one-third lower in the cities where sanitary precautions can and have been enforced than it is in the country.

After the laboratory ferrets out the bacteria or germs responsible for given diseases, and finds specific cures therefor, health conservation does not stop with the isolation of the patient and the adoption of precautionary measures to prevent the spread of the disease. The crushing burden of insanity can be materially lightened. "Psychopathic wards and clinics for the observation and treatment of persons in the first stages of mental disturbances are proving effective agencies for reducing the number of those who would otherwise require prolonged institutional care."¹ The foundation principles of health and conservation are making the transmission of

¹ Article by Alexander M. Wilson, Assistant Director, Department of Public Health and Charities, Philadelphia.

disease impossible through adequate sanitary precautions for the shop and the home. The enforcement of sanitary rules has made dysentery, scurvy and typhus curiosities to even the busiest practicing physician of the day. School inspection is reducing the spread of children's diseases. Through adequate housing regulations and inspection, the slum is no longer the city's culture medium for disease. We are learning the relation between fatigue and disease, and enlightened employers everywhere are accepting some degree of moral responsibility for the ill-health and lowered vitality of their employees due to overfatigue. The occupations that are prolific in certain diseases are being watched with increasing vigilance and acumen. To the exploitation of children in labor and the enervation of women through work ill befitting them, a basic cause for ill-health and premature death, society is no longer wholly indifferent. Pure food legislation and administration are rapidly reducing the vast amount of gastric and intestinal disorders. Limitations on the sale of habit-forming drugs are preventing many a person from putting a poison into his mouth that would steal away his brains or undermine his health. Streets are being so cleaned as no longer to be sources for the spread of disease. Sewage facilities are being made adequate and garbage is being disposed of in such a way as no longer to endanger the health of our cities. We are beginning to make certain that the streams on which our cities must rely for drinking water shall not be used with impunity as free sewage channels for all cities higher up the stream; no longer is it the rule that the residents of one city must drink the sewage of another. The community is accepting its responsibility for the prevention of death and disease among infants. Special care of the milk supply and facilities for saving babies are every year adding millions of dollars to our national

health through the lowering of infant mortality. In five years New York reduced the death of infants under one year from 144 to 102 per 1,000.

We will soon be in a position where definite moral and official responsibility can be placed for the spread and dissemination of each and every transmissible disease. This means that the heavy losses of preventable and postponable illness as expressed in diminished earning power, incompetency and want of energy are to be things of the past; and in their stead will be substituted an effective individual, physically wholesome, bodily and mentally, and capable of adding his full share to the productive power of his city.

Vital statistics are the barometers by which cities may gauge the intelligence and community care used in protecting health and in conserving and increasing productive power. From 1891 to 1898 the death rate decreased from 16.8 to 14.9 in Sweden, from 17.5 to 14.1 in Norway, from 20.2 to 14.7 in England and Wales, from 22.6 to 19.0 in France, from 20.7 to 16.1 in Holland, and from 23.4 to 18.0 in Germany. From 1880 to 1912 the death rate in the United States decreased from 19.8 to 13.9. In the five-year periods, 1891-1895 and 1905-1909, the death rate in the leading cities of the world declined from 20.5 to 15.4 in Berlin, from 18.8 to 14.4 in London, from 21.2 to 17.7 in Paris, from 24.6 to 17.4 in New York, from 20.6 to 14.4 in Chicago, from 21.1 to 17.5 in Philadelphia, from 23.6 to 18.7 in Boston. Social losses through preventable causes promise soon to be largely a matter of history.

But the big fact is that vitality and productive power are to be increased largely by the same means by which unnecessary deaths are prevented. If cities are to have their maximum growth and prosperity, their first and foremost effort must be to see that every citizen is a

healthy, vigorous producer. Herein lies the most hopeful factor in a constructive urban program.

The work which still remains to be done, as well as the avenues through which it is to be done, before we can claim anything like an adequately constructive health program for American cities, was well presented in the inaugural address by Dr. Victor C. Vaughan, of Michigan, at the meeting of the American Medical Association, at Atlantic City, in 1914. Dr. Vaughan said:

"In so great a work as the eradication of preventable disease, all intelligent people must coöperate. The law must support by proper enactments, and these must be enforced with justice and intelligence; it must recognize that the right to enjoy health is quite as sacred as that to possess property; that to poison men in factories and mines, to pollute drinking-water supplies, to adulterate foods and to drug with nostrums is manslaughter. Religion must teach the sanctity of the body as well as that of the soul, that ignorance is sin and knowledge virtue, that parenthood is the holiest function performed by man and that to transmit disease is an unpardonable sin. The teacher must know hygiene as well as mathematics. The capitalist must recognize that improvement in health and growth in intelligence increase the efficiency of labor. There never has been a time when scientific medicine has had so many and such efficient and appreciative helpers as it has to-day."

The means and agencies by which health can be properly conserved, the working life prolonged, and vitality and productive power increased are: (1) active departments of health and sanitation; (2) efficient and adequate public sanitation; (3) medical inspection and hygiene in the schools; (4) special protection and care of infants; (5) pure foods and drugs; (6) the elimination of undue fatigue at school and in the shop; (7) the

constructive and critical work of voluntary organizations; (8) wholesome environmental conditions, including just wages; (9) an effective housing program; (10) adequate recreational facilities.

The last two are considered in special chapters. To the consideration of each of the others, the remaining pages of this chapter are devoted.

HEALTH DEPARTMENTS

Of the \$17.34 per capita, paid in 1912 by each resident of cities in the United States of over 30,000, \$1.77 went for the city's expenses for health conservation and sanitation. Somewhat over twice this amount (\$3.99 to be exact) was paid for protection to person and property.¹

In 1912, in cities of over 30,000, 10.2 per cent. of payments for the city's expenses, other than for public service enterprises, went to health conservation and sanitation costs, as compared with 23 per cent. for protection to person and property.²

"The Cost of Municipal Government in Massachusetts," 1908, shows that the per capita expenditure for both health conservation and sanitation was \$1.59 for thirty-three Massachusetts cities in 1906, the population of which varied from 14,073 to 606,216. According to

¹In 1910 of the \$16.45 per capita paid by each resident of cities in the United States of over 30,000, \$1.62 went for the city's expenses for health conservation and sanitation, while considerably over twice this amount (\$4.10 to be exact) was paid for protection to person and property.

²In 1910, 9.9 per cent. of payments for city expenses other than public service enterprises went to health conservation and sanitation costs as compared with 25 per cent. (24.9 per cent. to be exact) for protection to person and property.

the census report in 1903 on statistics of cities having a population of 8,000 to 25,000 (the latest available data), the per capita expenditure for highways and sanitation was \$3.85, as compared with \$1.53 for fire and police departments.

HEALTH CONSERVATION

Of the \$1.77 paid in 1912 for health conservation and sanitation, in cities of over 30,000, only \$0.35 went for health conservation alone: that is, \$1.00 to health conservation to \$4.00 to sanitation.¹ Six times as much per capita went to the police department (\$2.04) and five times as much to the fire department (\$1.62) as to health conservation (\$0.35).²

In the thirty-three cities of Massachusetts,³ 9.01 per cent. of the expenses of all municipal departments went to health conservation and sanitation, as compared with 10.11 per cent. to the police department, 8.81 per cent. to the fire department, 20.62 per cent. to highways and bridges, and 6.10 per cent. to charities and corrections.⁴

The percentage of expenditures for health conservation varies in the different cities of the United States from 0.19 per cent. in cities with a population of from 30,000 to 50,000, 0.24 per cent. in cities having a population of 50,000 to 100,000, 0.29 per cent. for cities with

¹ The amounts were: health conservation, \$10,351,594; sanitation, \$41,570,602.

² In 1912 the per capita expenditures for other purposes were: highways, \$1.98; charities, hospitals and corrections, \$1.13; schools, \$5.01; libraries, \$0.22; recreation, \$0.64.

³ As shown in "The Cost of Municipal Government in Massachusetts," 1908, p. xlviii.

⁴ The percentages of the other departments were: education, 28.06; protection to life and property, other than fire and police, 1.8; libraries and reading-rooms, 2.03; recreation, 4.92; soldiers' benefit (estimated), .94.

a population of 100,000 to 300,000, 0.41 per cent. for cities with a population of 300,000 to 500,000, to 0.44 per cent. for cities with a population of over 500,000. The percentage paid for health conservation (1912) varies for each of the cities within the several groups. Thus Philadelphia pays 0.33 per cent.; New York, 0.57 per cent.; Chicago, 0.24 per cent.; Milwaukee, 0.39 per cent., for health conservation. Of the eleven cities of over 30,000 (1910) that spent 4 per cent. or more of their total expenses for health conservation, eight were in southern states.¹

In Massachusetts,² Worcester, with a population of 131,518, paid 13.25 per cent. of municipal expenditures for health conservation, as compared with an expenditure of less than 1 per cent. (0.94 per cent.) in Northampton, with a population of 20,310. The total cost for health

¹ CITIES OF OVER 30,000 SPENDING 4 PER CENT. OR MORE OF THEIR TOTAL EXPENDITURES FOR HEALTH CONSERVATION. (Average for U. S., 2.0.)*

New Orleans, La.....	4.1	Mobile, Ala.....	4.2
Fall River, Mass.....	4.	Augusta, Ga.....	5.1
Grand Rapids, Mich.....	5.0	Macon, Ga.....	4.3
Duluth, Minn.....	4.0	Montgomery, Ala.....	6.5
Savannah, Ga.....	4.9	Charlotte, N. C.....	4.0
Oklahoma City, Okla.....	4.8		

Total number of cities, 11; southern cities, 8.

* Financial Statistics of Cities Having a Population of Over 30,000: 1910, Table 28, p. 228.

The maximum and minimum amounts spent by cities in each of the four groups for 1910 are indicated in the following table:

HEALTH CONSERVATION—PER CENT. DISTRIBUTION FOR EXPENSES OTHER THAN OF PUBLIC SERVICE ENTERPRISES, 1910—CITIES OVER 30,000.*

Health Conservation			
Average of all cities.....			2.0
Group 1.....	2.0	Group 3.....	1.9
Group 2.....	2.1	Group 4.....	1.8
		<i>Maximum</i>	<i>Minimum</i>
Group 1.....	New Orleans, La.....	4.1	{ Cincinnati, O..... } 1.1
			{ Minneapolis, Minn.. }
Group 2.....	Grand Rapids, Mich..	5.0	{ Bridgeport, Conn... } 0.8
			{ Scranton, Pa..... }
Group 3.....	Savannah, Ga.....	4.9	Pawtucket, R. I..... 0.5
Group 4.....	Augusta, Ga.....	5.1	Quincy, Ill..... 0.3

* Ibid.

² In accordance with the report on the Cost of Municipal Government for 1906.

conservation in all the cities of the United States over 30,000 in 1912 was \$10,351,594.

The items included in health conservation, as given in the above statistics, are best revealed in the itemized expenditures for health conservation as given in the Massachusetts Report for 1906. In the 33 cities of Massachusetts, the total population of which was 2,066,913, the aggregate amount spent for health conservation (an average of 30 cents per capita) was \$618,929.87. Of this amount, \$256,923.84 went to general expenses.¹

Urban residents and public officials alike are grasping the importance of efficiency in health departments, and recognizing the need for expenditures commensurate with the results that it is possible for those departments to attain. The per capita expenditures for health conservation in cities of over 30,000 have increased from 21 cents in 1902 to 35 cents in 1912, an increase of over 50 per cent. in ten years. During this same period the per capita expenditures for the police department increased 10.8 per cent.; for the fire department, 24.6 per cent.; for charities, hospitals and corrections, 34.5 per cent.²

The only definite standard that can be set for the maxi-

¹ General Expenses.....	\$256,923.84
City Physician.....	6,584.59
Inspection of School Children.....	16,471.12
Contagious Diseases.....	72,940.29
Hospitals.....	135,519.86
Quarantine and Pest Houses.....	53,227.94
Morgue.....	9.95
Inspection Departments.....	49,210.69
Miscellaneous.....	28,041.59

Cost of Municipal Government in Massachusetts, 1908, p. 8.

² The per capita increases were: police department, \$1.84 in 1902 to \$2.04 in 1912; fire department, \$1.30 in 1902 to \$1.62 in 1912; charities, hospitals and corrections, \$.84 in 1902 to \$1.13 in 1912. The following increases in other expenditures are shown: highways, from \$1.69 in 1902 to \$1.98 in 1912; schools, from \$3.61 in 1902 to \$5.01 in 1912; recreation, from \$.58 in 1902 to \$.64 in 1912.

imum limit of expenditures for health conservation is that they should be adequate to produce a minimum death rate. The death rate need not be unduly high because the city is large. Neither is the death rate necessarily higher among certain races or nationalities. The amount of expenditures in money and vigilance will vary with such factors as the purity of the milk and water supply, the adequacy of sewers and sewage disposal, the occupations generally followed in the town, the average income of the poorer classes, the extent of unemployment, the sanitary habits and standards of the citizens, and the climatic and other environmental conditions. Within limits, the city's death rate is a purchasable commodity.

This increase in expenditures for health conservation has been accompanied by a radical departure from the outworn doctrine that government must confine its activities solely to negative and preventive measures. Health officials no longer confine themselves to the abatement of nuisances and the isolation of contagious and infectious diseases. To be sure, their legal powers are still limited by the courts' interpretation of the extent of regulation and prevention allowable under the police power. But public opinion is upholding health officials in the extension of the field of their activities from negative to constructive measures, and this public opinion, in return, is reacting to get a more favorable interpretation of the police power from the courts. Health departments are issuing pamphlets and leaflets and through the daily newspapers are instructing the citizen, rural as well as urban, as to the habits and hygienic measures essential to vitality and productive power. Moreover, these officials are beginning to accept their responsibility for pointing out the dangers to health and productive power from insanitary housing, unhygienic factories, overfa-

tigue in the shop and food contamination in the market and in the store.

In its health department the city has an avenue through which the productive life of its every citizen can be prolonged and his productive power increased. The urban citizen must look for his insurance to an adequately supported, highly efficient health department, shot through and through with the spirit of social responsibility.

SANITATION

Adequate sanitation is another agency that plays a vital part in the productive power of the urban citizen. No longer are the cleansing of streets, the removal of garbage and other sanitary necessities left to the discretion of urban dwellers, the most of whom are from rural communities and thus naturally tend to use and tolerate in cities the sanitary standards and usages that were adequate in the country.

If any reason were needed for the city's assuming complete control over sanitation, it could be found in the unnecessarily heavy cost for individuals to care for these matters separately. The result is that city expenditures for sanitation purposes are necessarily increasing—increasing because the area and the population are growing, increasing because health conservation in crowded areas necessitates larger community expenditures. Of the \$17.34 per capita paid in 1912 by residents of cities of over 30,000 for the expenses of the general departments of their city government, \$1.42 went for sanitation. This amount in 1910 was but \$1.29, while in 1902 it was but 88 cents. Cities of over 30,000 spent \$41,570,602 for sanitation in 1912, as compared with \$35,271,283 in 1910, and \$18,668,980 in 1902. Of all

the payments in cities of over 30,000 for expenses of their general departments in 1912, 8.2 per cent. was for sanitation. The per capita payment for sanitation in thirty-three cities of Massachusetts was, in 1906, \$1.30.

Sanitation expenses are necessarily greater in the larger cities.¹ That the expenditure varies, however, within the various groups is clearly shown in the following table, which gives the maximum and minimum expenditures for cities in each of the four groups.

	<i>Maximum</i>	<i>Minimum</i>
GROUP 1—		
(Pop. 300,000 or over)	New Orleans 14.5	Los Angeles 4.1
GROUP 2—		
(Pop. 100,000—300,000)	Atlanta 14.2	Denver 3.8
GROUP 3—		
(Pop. 50,000—100,000)	Jacksonville 20.7	Duluth 2.6
GROUP 4—		
(Pop. 30,000—50,000)	Tampa 18.0	Bay City 2.5*

* Financial Statistics of Cities Having a Population of Over 30,000: 1910, p. 230.

The items in sanitation expenditures are four: street cleaning, refuse collection and disposal, sewers and sewage disposal and general expenditures. Thus of the \$35,271,283 spent for sanitation in cities of over 30,000 in 1910, \$5,935,943 was for sewers and sewage disposal, \$20,243,228 was for street cleaning, and \$8,710,474 for

¹ PER CENT. SPENT ON SANITATION IN CITIES OVER 30,000, 1910 AND 1912. *

	1910		1912	
	<i>Population</i>	<i>Per Cent.</i>	<i>Population</i>	<i>Per Cent.</i>
Group 1.....	300,000 or over.....	7.9	Over 500,000.....	8.2
Group 2.....	100,000—300,000.....	7.8	300,000—500,000.....	7.5
Group 3.....	50,000—100,000.....	8.0	100,000—300,000.....	8.8
Group 4.....	30,000—50,000.....	7.0	50,000—100,000.....	8.4
Group 5.....	.....	..	30,000—50,000.....	7.2
Average for all cities.	For 1910.....	7.9	For 1912.....	8.2

* Financial Statistics of Cities Having a Population of Over 30,000: 1910, p. 228.

* Ibid: 1912, p. 40.

refuse collection and disposal, leaving but \$381,638 for "all other expenditures." In the thirty-three cities of Massachusetts in 1906, a total of \$2,676,703.57 (\$1.30 per capita) was paid for sanitation distributed as follows: sewer operation and maintenance, \$793,223.36; house connections, \$18,731.17; refuse and garbage disposal, \$1,240,265.19; metropolitan sewer tax, \$574,191.90; miscellaneous, \$50,291.95.¹ Thus minimum sanitation costs, commensurate with results to be attained by adequate sanitation, resolve themselves into proper costs for street cleaning, for sewers and sewage disposal and for refuse collection and disposal.

In every one of these fields there are opportunities for an increased efficiency that secures even better results at lower prices. Thus much of the work of sewage construction has been let out to private contractors at prices far above what the city could do the identical work for. Street cleaning, formerly and still too largely let out to favored contractors, is now becoming a science of its own when done by the city. For the collection and disposal of refuse the cities of over 30,000 paid \$8,700,000 in 1910 alone. The experience of German cities and recently of a number of American cities proves conclusively that this expenditure is wholly unjustified. These cities have demonstrated that garbage can be collected and disposed of at a *profit* to the city.

Some idea of the amount of refuse annually collected in a city can be gleaned from the tables cited by Mr. H. deB. Parsons in his book on "Disposal of Municipal Refuse," published in 1906, which show that New York annually collects 2,456,053 tons of 2,000 pounds each of

¹"Cost of Municipal Government in Massachusetts," Public Document 79, published in 1908, p. 9.

refuse; Buffalo, 190,022 tons; Philadelphia, 834,312; Washington, D. C., 162,702; Newark, 256,698.¹ Mr. William A. Venable in his book, published in 1906, on "Garbage Crematories in America," gives tables showing that the refuse collected per capita per annum for each of four large American cities was: 1,670 pounds in New York, 1,480 pounds in Boston, 1,140 pounds in Washington, and 1,500 pounds in Baltimore. He concludes that "the amounts per capita per annum in the United States may be roughly stated to range as follows: ashes, 300 to 1,200 pounds; garbage, 100 to 180 pounds; rubbish, 50 to 100 pounds."²

Now all of this garbage and refuse material is a source of wealth; it has heretofore been considered a source of waste. In all of the other items generally classed as sanitation expenditures, there is an equal opportunity for lowering costs. Measured by the results now being secured, there seems to be no justification for the American expenditures on sanitation.

MEDICAL INSPECTION OF SCHOOL CHILDREN

Another agency by which lower vitality and unnecessary deaths may be prevented and physical fitness and vigor increased is the medical inspection of school children including the teaching of adequate ideals of hygiene in the schoolroom. To be sure, much has already been done in this field, but much more can be done.

¹In the Borough of Manhattan, which is all built over, Mr. Parsons shows that the city collects per day an average of 4.886 pounds per capita as compared with 2.63 pounds in the Borough of the Bronx, 2.66 in Buffalo, 3.298 in Philadelphia, 2.92 in Cincinnati, 3.05 in Washington, D. C., and over 5 pounds in Newark.

²Wm. A. Venable: "Garbage Crematories in America," p. 23.

In 1890 one city in the United States had a system of medical inspection for its school children.¹ In 1907 111 cities had such systems; while in 1911 the number had increased to 411. Ninety per cent. of the 1,285 cities in the United States having organized systems of graded schools recently reported to the Russell Sage Foundation as to the extent of their medical inspection. Of this 90 per cent. but 43 per cent. reported regular organized systems of medical inspection in their public schools. Thus, while much has been done, the fact remains that 57 per cent. of our cities have not undertaken this very important and vital work. The forty-three per cent. of our cities that already have regular organized systems of medical inspection employ 1,415 school doctors for the work. But in only 214 of the 443 cities reporting systems of medical inspection do the systems include a complete physical examination conducted by doctors.²

The distinction must be clearly kept in mind between: (1) medical inspection of school children for communicable diseases, (2) the examination of school children for physical defects, (3) free medical treatment at schools or at special dispensaries for school children and (4) the inculcation of the foundation principles as to hygiene. These four divisions would include a number of activities, such as wholesome, low-priced lunches at cost, certainly in all the poorer sections of the city, the creation of special classes, such as open-air classes for consumptives, and special make-up classes for pupils

¹Bulletin 101 of the Department of Child Hygiene of the Russell Sage Foundation on "What American Cities Are Doing for the Health of School Children."

²In 106 of the 443 cities reporting medical inspection, this inspection was administered by boards of health; in 337 by boards of education.

whose school work has been retarded by corrected physical causes, such as the removal of adenoids.¹ Such inclusive activities as these will ultimately give to our cities maximum returns in productive vitality for a minimum outlay at the source of physical disorders and ill-health. "Medical inspection is an extension of the activities of the school in which the educator and the physician join hands to insure for each child such conditions of health and vitality as will best enable him to take full advantage of the free education offered by the state. Its object is to assure better health conditions among school children, safeguard them from disease, and render them healthier, happier, and more vigorous. It is founded on a recognition of the intimate relationship between the physical and mental conditions of the children, and the consequent dependence of education on health conditions."

The spread of communicable diseases is controlled at its source through medical inspection of school children followed by the needed precautionary measures. The "catching" diseases, such as measles, chicken-pox,

¹ The functions of New York City's Department of Child Hygiene, established in 1908, include "the supervision of all midwives practicing in the city, the prevention of infant mortality by the instruction of mothers in the proper care of babies, the supervision of day nurseries, foundling asylums, and places where children are boarded out, the medical inspection and physical examination of children attending public schools, and the enforcement of that part of the labor law which relates to the issuing of employment certificates to children between the ages of fourteen and sixteen." The commissioner of health of the city now recommends the extension of the inspection service to all free schools, the control of contagious diseases in the schools by nurses, the holding of school consultations with parents by medical inspectors to reduce the amount of home visiting by the nurses, and the establishment of school and dental clinics. Beard: *American City Government*, pp. 276-277.

whooping cough, mumps, scarlatina, diphtheria, influenza, small-pox, trachoma, need no longer harass and undermine the vitality of school children, and cause a vast educational loss through poor attendance and listless work. Even those children "with just a cold" are now being isolated and the spread of colds thus prevented. Trachoma, which not only impairs the health but leads to blindness, is already being practically stamped out in all American cities, save where newly arriving immigrants constantly bring new sources of contagion. Conjunctivitis is being checked since it is known to be a germ disease. Sixty-nine per cent. of the 1,219 children examined in Edinburgh had some skin disease, and 60 per cent. had sores due to head lice. Such neglect as this must hereafter be direct evidence of criminal neglect on the part of school officials. Sanitary drinking fountains and drinking cups, and individual paper towels are doing much to prevent the spread of other diseases. Many a schoolroom is no longer, and no schoolroom ought ever again to be, a center for contagious disease.

The school is the ideal place for the inculcation of proper habits and standards of hygiene. Close association with medical experts is giving new meaning and new effectiveness to the teaching of hygiene. Pupils can be taught reasons for the sanitary drinking fountain, the individual towel, the automatic control of temperature; they can be taught to see the place and value of ventilation of cloakrooms, what diseases are infectious and why, the reasons for the isolation of children with communicable diseases, the place and value of recreation, the importance of corrective gymnastic exercises. In all day schools, but more particularly in trade, manual training, and vocation schools, there is a rare opportunity for instilling adequate sanitary and hygienic standards which will later be demanded rigidly for the workshop,

the store and the factory. The home cannot but feel the impetus of wholesome hygienic conditions when such standards are inculcated at the school desk.

To the school doctor and the teaching of hygiene in the schoolroom can be added the work of the school nurse—the instructor of parents, pupils and teachers, the efficient link between the school and the home.

The cost of medical inspection of school children is comparatively slight. In general, the per capita cost ranges from ten to fifty cents per annum. "It seems to be a fair generalization to say," concludes the study made by the Department of Hygiene of the Russell Sage Foundation, "that medical inspection for the detection of contagious diseases can be adequately performed at an annual cost of about fifteen cents per capita, while physical examinations, similarly performed, and including inspection for the detection of communicable diseases, cost about fifty cents."

Of greater importance to adult vitality than inspection for communicable diseases is the physical examination of school children for physical defects. Of the 275,641 school children examined in the Borough of Manhattan in New York City in 1905-07, 198,139 were found to be in need of treatment. Seventy-one and nine-tenths per cent. of the children needed treatment. Of these 1 per cent. had pulmonary diseases, 21.2 per cent. were afflicted with defective vision, 1.2 per cent. were afflicted with defective hearing, 15.8 per cent. had obstructed nasal breathing, 49.0 per cent. had defective teeth, 27.4 per cent. had hypertrophied tonsils, 16.9 per cent. had posterior nasal growths, and 2.5 per cent. were afflicted with defective mentality.¹ Of the 19,381 school children examined in Rochester in 1912, 32,184 abnormalities were found, 1,524 of which were defects in

¹ Allen: "Civics and Health," p. 37.

vision, 534 in hearing, 1,124 in nasal breathing, 7,942 in teeth, 5,496 in hypertrophied tonsils and 2,815 in adenoids.¹ Other investigations show that malnutrition runs as high as 7 per cent. in the school children in working-class districts.

"Inspections in several of our large cities show that about 25 per cent. of the children have eye-strain; that more than two-thirds of them between the ages of seven and nine have defective teeth; that diseases of the nose and throat, particularly nasal obstructions, exist in from 6 to 25 per cent. of them according to age and social condition; and that malnutrition (running as high as 70 per cent. of the children in the schools in the working-class districts) is everywhere so common in our large cities as to be a menace to the physical welfare of the country."²

It needs no argument to show the great value of examinations for such physical defects. The removal of adenoids, the correction of vision, the remedying of defective hearing before it is too late—all this means both greater progress in school and greater vitality in later life. And both of these betoken greater productive power for the future.

European cities have taken the lead in founding free dispensaries for school children. It is just as vital to a democracy to have a citizenry of sound bodies as to have an educated citizenry. We have gone far toward giving equal educational facilities for all, but until facilities equally as adequate and equally as free for health and vitality are provided, the old phrase about a sound mind in a sound body will remain ironical cant. Sound teeth are essential to digestion and the dentist is essential to sound teeth. Now many a family, either through

¹ *The American City*, October, 1913, p. 317.

² Beard: "American City Government," pp. 275-276.

inadequate means or through improper standards, will not give their children adequate dental care even after it is known that such care is urgent. The only remedy is the establishment of free dental dispensaries for school children. The same situation necessitates free dispensaries for the removal of adenoids, for the correction of defective vision and hearing, for the curing of enlarged glands, and for the care of skin and other contagious diseases. In Philadelphia's free eye clinic 2,173 cases of defective vision were treated in one year, and glasses furnished to 1,710 cases.

CARE OF INFANTS

Special protection and care of infants find a quick response in a diminished death rate. In but few fields of health work are results so quickly seen and efforts so amply rewarded. "The need for such effort is evident," said Dr. A. C. Abbott, in a recent address, "when we remember that of 1,000 children born there die during the first year of life, in our cities of average composition, from 150 to 200 annually, and that, throughout our communities in general, from 45 to 50 per 1,000 die before reaching five years of age. In spite of this condition, which is now, in general, better than was formerly the case, New York City, offering one of the most difficult of problems in this particular, has, by unremitting, intelligent effort, cut the mortality rate of infants under one year of age from 244 to 102 per 1,000 in the space of twenty-six years. What has been done in that city can be done elsewhere by corresponding energy and expenditure of money."

Berlin decreased the death rate of infants of one year or younger from 305 per 1,000 in 1882 to 197 per 1,000

in 1907, a decrease of 35 per cent. in twenty-four years. Through the coöperation of private organizations and health authorities, Philadelphia reduced the death rate of her infants under two years of age from 6,530 in 1910 to 5,619 in 1913, a decrease of 13 per cent. In five years the death rate of infants in New York City was reduced, through the combined activities of private organizations and the health authorities, from 144 to 102 per 1,000. Such facts as these reflect what happy profits are returned from moneys and energies spent in the special protection and care of infants.

This care and protection include: (1) fresh air facilities and, where needed, hospital facilities, such as are offered in Philadelphia on the Race Street Pier; (2) advice and help to mothers given through (a) bulletins such as those issued by the Boston Board of Health, but more particularly through (b) visiting nurses who go directly to the homes, and (c) through milk stations, whether supported by private organizations or public authorities, at which milk unquestionably pure can be secured.

The purity of the milk supply, all-important for the young, is vital to adults as well. The difficulty in getting a pure milk supply for cities lies in the number and complexity of sources from which urban milk supplies come. Professor Beard¹ states that New York City draws its milk supply (one and one-half million quarts daily) from over 40,000 dairies scattered through seven states. This milk is distributed by nearly 6,000 wagons to over 12,000 stores. For the inspection of this milk there were, in 1906, 14 New York City inspectors in the country and 16 in the city. The country inspectors could have made their rounds of all the areas and farms supplying milk no oftener than once a year, while the city

¹ Beard: "American City Government," p. 274.

inspectors could make their rounds no oftener than once in 30 to 40 days. Mr. Arthur E. Post, special inspector in the Department of Public Works, Philadelphia, found that Philadelphia's milk supply "comes from Pennsylvania, New Jersey, Delaware and Maryland, with now and then a minor quantity from New York state. The maximum haul is about 150 miles and the average haul about 50 miles. This milk is produced on about 12,000 farms outside the city limits and 200 farms within the city limits. Practically all of our milk is hauled to town by the common carriers: very little milk is brought into the city directly by wagons from the farms. Within the city this milk is distributed by about 370 dealers, who have their own wagon routes, and milk is also sold in some 2,500 stores and shops of various kinds. The milk dealers pay the farmer about four cents a quart and this same milk is retailed at eight cents a quart or more." The wholesomeness of Philadelphia's milk supply depends on the efficiency of one chief inspector of milk, who draws a salary of \$1,900 a year, and fourteen assistant inspectors on a salary of \$1,020 per year. The small town of Jamestown, New York (population 31,297), has 75 milk dealers coming from 250 dairies and farms. It is safe to state that the average age of milk when it reaches the city is from 45 to 48 hours.

The evident impossibility of safeguarding by city inspection the contamination of the milk at the source, whether through unhealthy or unclean cows, or improperly cleansed cans, is leading generally to the conclusion that the city's milk supply must all be pasteurized. Thus in New York and Philadelphia no milk not pasteurized or "certified" can now be sold.

The cost of pasteurization, i. e., the cost of holding the milk at a temperature of about 145° F. for thirty minutes, is negligible, being from one-fourth to one-half

cent per quart, and most authorities now hold that the chemical constituents of the milk are not changed by heat. But pasteurization fosters uncleanness and carelessness on the part of the milk producer. Clean, raw milk is no doubt to be preferred to pasteurized milk, but it costs money, the dairyman usually feels, to have ideal conditions in his dairy. The tendency of the dairyman, therefore, if his milk is to be pasteurized anyway, is to neglect the necessary precautionary measures as to cleanliness. Moreover, while the cost of pasteurization is negligible to the large dairyman, it is practically prohibitive to the small farmer.

The New York Milk Committee, which is a voluntary organization working in the interests of improving the milk supply of New York City, decided in March, 1911, to appoint a Commission on Milk Standards.¹ This commission found some of the essentials for assuring pure milk in cities to be as follows: licenses must be required for selling and permits for the production of milk for sale; cow stables must be "light, well ventilated and clean"; the milk room must be "clean, light and well screened"; a physical examination of all cows shall be made at least every six months by a veterinarian approved by the health authorities; the employees shall be "personally clean and shall wear clean outer garments"; the "milk shall be cooled to 50° F. or below within two hours after it is drawn from the cow and it shall be kept cold until delivered to consumer"; quantities in less than 20 quarts or more shall be delivered in single service containers; receiving stations and bottling plants shall be "clean, well screened and lighted";

¹ Its conclusions adopted at the meeting held in Richmond, Virginia, May 2 and 3, 1913, have been reprinted by the National Government as Reprint No. 141 from the Public Health Reports.

stores retailing milk shall be provided with a suitable room or compartment at which the milk shall be kept at a temperature not exceeding 50° F.; all water supplies shall be from uncontaminated sources; and no milk containing less than 3.25 per cent. but more than 2.5 per cent. of milk fat shall be sold, unless the container is "conspicuously marked 'sub-standard milk'"; that milk shall not contain more than 100,000 bacteria per cubic centimeter; that pasteurized milk shall be "heated at a temperature of 140° F. for not less than 20 minutes, or at a temperature of 155° F. for not less than 5 minutes."

The realization of these standards means that either the state must undertake the inspection of dairies and milk supplies for all consumers, or that the cities must limit their milk dealers to a number sufficiently small as to be thoroughly inspectable by the city's staff provided for that purpose. Boston's milk supply is already practically handled by but four or five dealers. The economies in such centralization were strikingly brought out by a report on "The Economic Problems of Milk Distribution in Their Relation to the Public Health," by John R. Williams, M.D.¹ This was an intensive study of the milk supply and milk distribution in Rochester, N. Y.

¹"For the purpose of intensive work, the city was divided into a number of districts. It was found, for example, in the fourth section there were 27 milk dealers supplying 273 homes. 'These 27 dealers travel more than 25 miles in this district, whereas one dealer could render the same service traveling not more than 2.6 miles. In section 8 there are 57 distributors traveling more than 30 miles daily in the section to supply 363 homes with milk. One distributor could render this same service in a travel of 1.7 miles. On many streets there is a milk dealer for every two homes; oftentimes several different dealers will be found going to one home. In one case nine peddlers were found supplying one pint each to one home.' Reprinted from the Transactions of the Fifteenth International Congress on Hygiene and Demography, held at Washington, D. C., September 23 to 28, 1912."

Dr. Williams decided that through concentration "at least \$100,000 could be saved in unnecessary investment in real estate, milk-room equipment, and horses and wagons" in distributing milk in Rochester. "The economies resulting from this combination and concentration," he continued, "would reduce the cost of distribution at least \$300 daily."¹

The dangers inherent in monopolistic control of a city's milk supply, coupled with the unquestionably depressing effect on milk production and farming efficiency among small farmers in all parts of the surrounding communities, seem to lead to the conclusion that, in lieu of encouraging monopoly, such as must be done if the city is to safeguard its own milk supply, a better policy is for the state to undertake the inspection of dairies and milk. Pure milk is as important for the country as for the city. Moreover, the total number of inspectors required if each city had its own inspecting staff would be several fold the number of inspectors required under cen-

¹ He justifies this conclusion as follows: "In all, 173 distributors were studied. These represent practically the entire milk industry of the city. The enormous waste and the saving that could be effected by proper distribution incident to the distribution of milk are more clearly set forth in the following comparative tabulation:

<i>Under Present System</i>	<i>Under Model System</i>
356 men, and in many cases their families	90 men
380 horses	50 horses
305 wagons	25 horse-drawn trucks
2,509 + miles travel	300 miles travel
\$76,600 invested in milk-room equipments	\$75,000 equipment for sanitary plant
\$108,000 invested in horses and wagons	\$30,750 equipment of horses and trucks
\$2,000 present daily cost of distribution	\$600 estimated daily cost of distribution
\$720,000 yearly cost of distribution	\$220,000 estimated yearly cost of distribution

In the foregoing estimates, liberal provision is made for amortization, interest, and superintendence. Mention is not made of all the wastes that could be obviated under efficient management, and it is believed that conclusions here presented represent most conservative judgment. There is little question that if the milk supply of Rochester were to be distributed by one agency, properly organized and equipped, a saving to consumers of at least \$500,000 yearly could be effected."—John R. Williams, M.D.: "The Economic Problems of Milk Distribution in Their Relation to the Public Health."

tralized inspection. Centralization of inspection would, therefore, result in large economies. Thus in Essex County, New Jersey, there are sixteen municipalities, each of which has its own milk inspecting force. In other words, every dairy in the county has to be inspected as many times as there are cities to which its milk is or might be sent. The need for central control is made all the more apparent in view of the character of inspection needed. In the first place, qualified veterinarians must give tuberculin tests and periodically examine the physical condition of all the cows from which the city draws its milk supply. Then qualified physicians must give clean bills of health to all employees handling this milk. The barns and the milk cans must then, through inspection, be kept up to proper sanitary standards. The cooling of the milk, the temperature at which it is brought into the city and the conditions under which it is kept and sold within the city, all responsibility for refrigeration in transit—all these need supervision and inspection. State inspection of milk is the logical solution for pure milk at minimum costs. The state's work can be supplemented by assistance from national bureaus.

After the state assumes the inspection of the milk, the city can reduce its milk costs and guarantee the quality of its milk supply through municipal milk stations at which milk not of the required standard can be pasteurized and placed in properly sterilized receptacles and delivered in vehicles equipped in a sanitary manner for milk-carrying purposes. Pasteurization could thus be done at minimum costs and the element of waste in distribution could be eliminated. Mayor Samuel A. Carlson, of Jamestown, N. Y., found that a milk station could be built in that city at a cost of \$20,000, "the entire amount of which could be paid from the first year's revenue, after which a substantial reduction in

the price of milk could be made." Much could be done, too, by encouraging milk distribution by trolley freight.

ADULT VITALITY

If urban productivity is to reach its maximum, the relations of vitality to fatigue must be more clearly recognized, and not merely recognized, but translated into action by both employers and employees. In his "Report on National Vitality," page 47, Professor Irving Fisher says: "The economic waste from undue fatigue is probably much greater than the waste from serious illness. . . . The number that suffer partial disability through undue fatigue certainly constitute the great majority of the population. No observer can fail to conclude that this is true of the American working, business, and professional classes, and the latest word among the students of school hygiene is that it is true to a large extent even among children. If, therefore, we assume that only 50 per cent. of the population is suffering some impairment of its best powers through undue fatigue, we are on safe ground. The extent to which the power of this supposed 50 per cent. of the population is impaired must certainly exceed 10 per cent. . . . Yet if only 50 per cent. of the population is suffering an impairment equal to only 10 per cent. of its working powers, the result is equivalent to 5 per cent. of the population suffering total impairment, which is more than the 4 per cent. impairment from serious illness."

Through a proper study of fatigue curves, and through the scientific selection of the worker, the amount of pig iron loaded at the Bethlehem Steel Works per man was increased from 12½ tons to 47 tons per day, and a study of fatigue and efficiency by certain employers has revealed that the eight-hour day is, judged by re-

sults, for them the most economical day. Scientific management is teaching much of value as to how to conserve energies and secure results without transgressing on the fatigue limit, and thus pauperizing the employee and the industries dependent on him.

Coupled with such studies by employers is a study of the relation of fatigue to the drinking of alcoholic liquors and the need for vice control. It would seem clear that the community by furnishing recreation centers and other social substitutes for the saloon will reap bountifully from its investments in the way of increased output and a more effective citizenry. For these ends, too, a definite social responsibility rests upon all employers.

The close relation between environment, earning power and physical defects is well shown in the table given below, worked out by Dr. Allen and quoted in his book on "Civics and Health," page 39.¹ The lower the

¹ EFFECT OF ENVIRONMENT ON PHYSICAL DEFECTS

SHOWING PER CENT. SHARE OF PHYSICAL DEFECTS OF CHILDREN, UNFAVORABLE HOUSING CONDITIONS AND CHILD MORTALITY FOUND AMONG EACH FAMILY INCOME GROUP.	WEEKLY FAMILY INCOME						
	\$0-10	\$10-15	\$16-19	\$20-25	\$25-29	\$30 and Over	\$100
Proportion to total families...	%	%	%	%	%	%	%
Physical Defects	8.4	32.7	15.2	23.8	3.9	15.6	100
Malnutrition.....	13.8	43.4	12.4	17.9	3.4	9.	100
Enlarged glands.....	8.6	37.4	14.6	22.6	3.6	13.2	100
Defective breathing.....	9.6	32.3	15.5	24.4	2.8	15.4	100
Bad teeth.....	8.1	32.2	15.3	24.5	4.8	15.1	100
Defective vision.....	8.2	34.6	16.5	22.1	1.4	17.3	100
Unfavorable Housing Conditions							
Dark rooms.....	8.2	35.4	18.1	18.4	3.8	15.9	100
Closed airshaft.....	6.9	30.2	18.9	26.4	3.2	19.6	100
No baths.....	10.1	38.5	16.5	19.7	4.4	10.8	100
Paying over 25 per cent. rent.....	8.6	27.6	21.7	14.7	....	27.6	100
Child mortality							
Families losing children...	10.3	35.5	14.7	20.5	5.4	13.6	100
Families losing no children.	6.4	30.1	15.7	26.9	2.4	18.6	100
Children dead.....	11.7	36.2	13.1	20.8	6.1	12.1	100
Infants dying from intestinal diseases.....	8.9	37.6	18.3	18.8	4.	12.4	100
Children working.....	4.2	19.5	13.2	30.3	11.5	21.3	100

income, the larger the number of physical defects; and the larger the number of physical defects, the lower the income. It is this vicious circle that more than anything else prevents a larger increase in the total social income. It seems clear that a minimum wage of \$8 a week for women, or \$10 a week for men, and a family income of \$800 per year, is necessary to a healthy, productive life. The relation between health and social conditions is so close as to demand the attention of every person interested in urban welfare.

Other ways by which loss of time can be prevented through illness and physical incapacity are: better protection from machinery; prevention of accidents and compensation for accidents through workmen's compensation acts; laws restricting child and woman labor, and active civic attention to housing and recreation problems.

For all social and individual carelessness in the protection and conservation of health, society pays in hospitals, charity asylums, refuge homes for the poor, and, of course, in lowered vitality and decreased productive power of its workers. In these various ways every taxpayer contributes to bringing the wage up to a living wage. It must be recognized, after all, that a living wage, whether it comes through statute or through social justice, is necessary for the elimination of social waste and the efficient organization of society. Wealth first begets health, then health begets wealth.

The supreme justification of the complex activities of public officials and private organizations is the inculcation of habits of health and of adequate hygienic standards—standards that will ultimately make of every individual his own health inspector. These standards have been effectively impressed, not only by the action of public officials, physicians and surgeons, but also by effective publicity campaigns for the elimination of flies and fresh

air campaigns for the prevention of tuberculosis. Of like effect also are the anti-spitting ordinances; the public drinking fountains; the flushing of the streets; the inspection of food, drugs and milk; housing regulations; factory laws, and labor legislation. These factors have done more than merely to prevent the spread of disease and the lowering of vitality. They have been powerful creative forces in increasing health and thus multiplying productive power.

Waste through sickness and incapacity can be eliminated, vitality increased and productive power furthered through wise public activity in conserving health and encouraging vitality. These activities in the end will be translated into money and social prosperity through a longer working life and through labor more efficiently and energetically done.

CHAPTER XV

VITALITY THROUGH RECREATION

A prerequisite to healthy children and vitality in adults is wholesome recreation. Ambition and earning power are born of physical energy as well as of stimulation from environment. As a rule the child anemic and frail from want of proper recreation means an adult of low vitality and complacently unproductive.

A saunter through the crowded sections of almost any American city will soon convince one that Dickens' phrase, "The bucket of a human well," aptly describes the "recreation center" in many urban sections. The baby as he crawls wipes up the filth of alley and street. The boy must play with other "gutter urchins" in narrow passageways or in side streets. The lad in adolescence can find expression for the group spirit only in the gang. Young women and young men must meet their "company" in the street or in the commercialized dance hall; and the laborer home from work must take his evening rest on a back fire escape overlooking a sea of clothes lines and back alley débris.

There is a special reason for recreational facilities that energize young workers. So long as society allows the young to be workers, the least it can do, in all conscience, is to grant them facilities for play and recreation when work hours are over. Justice demands this all the more because the child laborer is employed at deadening tasks—indeed, is scarcely less a machine than the machine he tends. A study of the occupations of

children between the ages of 14 and 18 years in a certain section of the Borough of Manhattan, made by the Committee on School Inquiry in the City of New York, showed that "out of 24,765 children reported on, 22,781 were employed in occupations having more than 100 workers, in which the vast majority were performing tasks of a routine or an automatic rather than an energizing sort, and of the 1,984 employed in smaller industries, not more than one-half were engaged in occupations which might be classified as invigorating or stimulating."

Juvenile offenses, classified in order of their frequency—stealing, incorrigibility, disorderly conduct, assaults and malicious mischief—show that such offenses are the direct result of a disordered social conception that tolerates huge expenditures for needless boulevards, while leaving the city's present and future workers without adequate recreational facilities.

The simple truth is that, in arrests, in police protection, in court procedure, in juvenile detention homes, and in young women and young men bankrupt physically and debauched morally, the taxpayers of American cities are daily rendering up their tribute for the city's negligence as to recreational facilities. This tribute vastly exceeds in good money the sums that would be needed to provide proper recreational facilities for young and old. The taxpayers must make the expenditures. The only question is whether these expenditures shall be for negative or constructive measures.

The argument for adequate recreational facilities is not solely that the city will thereby save the expenses of caring for a large number of inadequates caused by the want of wholesome recreation. Of greater importance is the fact that productive power can be stimulated in no other way so directly as through recreation,

and through the moral and social standards of the type which it is impossible to create in the commercialized dance hall and poolroom, but which is the natural outgrowth of healthful play for the young and vitalizing recreation for the adult. Play alone can keep children healthy. The brain-fagged worker in the counting-room and the fatigued laborer in the shop will have excitement that ends in debauch, if the means are not at hand for relaxation that ends in renewed vitality. If the city would have law-abiding citizens it must stop making lawlessness necessary in childhood. And every city makes outlaws of its children when it provides no opportunity for play save in breaking ordinances. The gang spirit under normal conditions can inculcate lessons of cooperation of inestimable value in later life: under abnormal conditions it can find expression only in outlawry. "Tempt not" is an ancient law broken by every city which does not have adequate facilities for normal recreation.

"There are 600 commercial dance halls in New York City, twelve times as many dance halls as recreation centers." "In addition to this there are 11,350 saloons, 800 motion-picture shows, innumerable poolrooms, candy shops and theaters, all of which are the centers of an unregulated, unsupervised recreational life." This situation in New York City is all too prevalent in other American cities. It is therefore in such places as these more than in the home or in the school that civic, moral and social standards are being set for life. The choice open for cities is this: Shall the moral and civic standards of its citizens be set in commercial "places," the standards of which are determined by the maximum return in dollars and cents, or in recreation centers whose ideals are shot through and through with community and individual welfare?

It is now a maxim of juvenile court procedure that

children should not be thrown into association with adults before, during, or after trial. Yet without proper recreational facilities the children of our cities are spending all of their playtime under just such associations. The People's Institute of New York City found 156,600 children upon the streets in selected sections of Manhattan. The children were "doing their best at healthful, clean-minded, hygienic play, but the games were carried on in indescribable dirt and filth, with 30,000 leering loungers in streets and saloons looking on, many of them only too ready with sinister suggestions of evil." Moral and civic norms of the type needed by our cities cannot be inculcated amidst adult loafers; they can only be inculcated in recreational centers where the moral atmosphere is as clean as childhood itself.

The urban playground and recreation center can be made the place where health is assured and life-long standards set. But more than this, it can be made the place where American standards and ideals are inculcated. A census of the attendance at the Star-Garden Recreation Park in Philadelphia on August 29, 1912, showed that of the morning attendance 64 and 12 per cent. respectively of the 1,141 males in attendance were Russian Jews and Italians, while 70 per cent. of the 670 females were Russian Jews and 9 per cent. Italians. In the evening of the males in attendance 54 per cent. were Russian Jews, 22½ per cent. Italians, 9½ per cent. colored, and 14 per cent. miscellaneous; of the females, 84 per cent. were Russian Jews, 6 per cent. Italians, 6 per cent. colored, and 4 per cent. miscellaneous. The miscellaneous item included Poles and Greeks as well as Americans. Here is offered a rare opportunity for the preservation of the best of the fatherland's folk ways and customs while teaching the elements of Americanism. The playground can be made as effective an agent

for assimilation as was the country life of earlier days—effective because it preserves the best of the old while implanting the new.

The need for, the use and the various types of recreation pursued at recreation centers is shown by the fact that in 1912 the attendance at certain of the small parks under the supervision of the West Chicago Park Commission totaled 2,980,000 for the various functions specified in the appended footnote.¹

¹ Attendance on the activities in the small parks, numbers 1, 2 and 3, and in Holstein and Douglas Parks during the year 1912:

Activities	Park 1	Park 2	Park 3	Holstein	Douglas
Swimming pool:					
Men.....	83,311	108,009	39,622	.....	148,731
Women.....	19,628	20,730	11,083	.....	88,830
Outdoor gymnasium and play-field:					
Men.....	69,591	33,842	99,230	33,739	130,755
Women.....	41,664	30,441	43,360	33,017	144,855
Children's playground.....	80,298	76,606	105,755	24,841	
Tennis courts.....	1,206	.....	1,699	.....
Skating pond.....	33,934	5,249	29,426	15,650	
Garden.....	6,159	.....	3,265	.....
Shower baths:					Open
Men.....	116,847	96,293	62,776	30,028	Only
Women.....	34,666	57,356	9,022	8,119	From
					May 1st
					to
					Oct. 31st
Indoor gymnasium:					
Men.....	25,982	21,696	24,300	7,852	
Women.....	12,063	16,198	9,022	8,119	
Assembly hall:					
Occasions.....	*355	*284	*225	*126	
Attendance.....	40,284	69,100	38,302	15,849	
Lunch room:					
Occasions.....	*72	.....	.....	.....
Attendance.....	5,979	.....	.....	350	
Club rooms:					
Men.....	8,649	12,663	13,128	1,294	
Women.....	6,667	11,486	10,865	1,115	
Children's playroom.....	18,065	15,672	37,556	.....
Library.....	60,884	68,733	57,577	5,831	
Field and track events.....	8,200	4,900	8,500	6,000	
Playfield.....	97,770	70,741	13,409	13,687	
Concerts:					
Attendance.....	16,200	22,000	22,500	10,500	
Play festivals and celebrations:					
Outdoors.....	8,000	17,400	15,500	Field house opened June 30, 1912	
Totals.....	796,047	759,116	685,776	225,891	513,171

* Not included in totals.

The Douglas Park Gymnasium and Natatorium, under the control of the same board, were attended by 130,755 boys and 144,855 girls, and 148,371 boys and 88,830 girls, respectively. The attendance on the various recreational facilities under the control of Chicago's South Side park commissioners in 1912 was 5,531,737. Within half a mile radius of eleven of these South Side parks is a total population of 342,000. Of these 189,500, or 55 per cent., used the park regularly. As only those individuals using the park at least twice a month were counted as regular attendants, this percentage is exclusive of the thousands that flocked to special occasions such as play festivals. Young children used the Shot Tower Playground in Philadelphia from June to September of 1913 19,170 times. Up to December 31 the attendance had totaled 42,113. And this on a playground 150 feet square.

THE FACILITIES NEEDED

The recreational facilities needed for cities may be roughly classified as those used for supervised recreation for children up to and including the age of sixteen, and those for recreation suitable for all over sixteen years of age. The facilities for children under sixteen need special adaptation to the following groups: (1) those up to three years of age, (2) those from three to six years, (3) from six to ten, (4) from ten to sixteen.

The facilities needed for babies include nurseries, whether paid for by private institutions, churches, charitable organizations or the city; sand piles and shelters, and special instructions by nurses to mothers and "little mothers."

The chief need for children of from three to six years is a place for recreation where there is plenty of light and air, a minimum amount of dirt and dust, and where there is at least sufficient supervision to guarantee play free from the intrusion of older children. Simple apparatus and games must also be provided.

For children of from six to ten years more advanced kinds of games with organization prominent is the characteristic need. This is the period when the gang spirit should find opportunity for normal expression in co-operative play. Indoor gymnasiums and outdoor sports, shower baths and the swimming pool, the school garden and nature studies, the story hour and the reading-room can all be used effectively in wholesome growth, all combine in inculcating moral and social standards and in laying a goodly foundation for future earning power.

All the means used for children of from six to ten years, and many others, such as the clubroom, can be used with increased effectiveness for children of the ages of ten to sixteen inclusive. In this period there is need for well organized games competently guided; for summer camps; for lectures and other educational facilities. For the children of this period and for the older ones of the preceding period, play festivals are required; folk songs and dances; field days and competitive sports such as baseball, football, tennis and skating; dances and social gatherings and the assembly halls in which to hold them, and free evening lectures are all requisites.

For adults little paid supervision is needed. For this group should be provided the swimming pool, the recreation pier, the large park, and the golf course, as well as opportunities for the games outlined in the preceding

period. But of greatest importance for this group is the social center under neighborhood control. From 1905 to 1912 inclusive the attendance at the clubrooms in Chicago's South Side parks increased from 4,940 to 124,714, an increase of nearly 2,500 per cent., while the attendance in the assembly halls increased from 27,709 to 351,192, an increase of nearly 1,200 per cent. These two types of recreation showed greater increase than did those of any other type, not excepting even the shower baths and the outdoor sports. The record of attendance at the clubrooms showed, moreover, that those rooms are used consistently throughout all the year, though the attendance was somewhat greater during the nine months of autumn, winter and spring. The same was true of the use of the assembly halls and reading-rooms.¹

The appended table gives the uses to which four of the smaller recreation parks on the South Side,

¹ The monthly attendance at assembly halls for the year 1912 was as follows: March, 40,691; April, 38,212; May, 42,749; June, 30,594; July, 11,322; August, 6,794; September, 14,568; October, 27,109; November, 32,883; December, 35,344; January, 35,405; February, 35,521; total, 351,192.

At the clubrooms the attendance was as follows: March, 11,321; April, 11,498; May, 11,760; June, 10,669; July, 7,933; August, 6,773; September, 7,419; October, 9,795; November, 11,591; December, 11,291; January, 11,467; February, 13,196; total, 124,714.

At the reading-rooms the attendance was as follows: March, 56,856; April, 37,744; May, 40,668; June, 37,794; July, 44,690; August, 42,419; September, 32,333; October, 36,287; November, 43,023; December, 41,006; January, 42,612; February, 38,395; total, 493,827.

See the annual report of the South Side Park Commissioners of Chicago for the year ending February 28, 1912, pp. 54-56.

Chicago, were put during the year 1912.¹ These are all small parks, their acreage being respectively 8, 2.89, 3.75 and 1.94 acres, making a total of 16½ acres.

RECREATION COSTS

Recreational facilities can be obtained in cities most economically only through public expense. The average *annual* expenditure for recreation of 391 families cited in Professor Chapin's "Standard of Living" was but \$9.73.

¹ Summary of the uses of the different small park facilities for the year 1912, on the South Side, Chicago.

Facility	Park 1	Park 2	Park 3	Holstein
Area.....	8 Acres	2.89 Acres	3¾ Acres	1.94 Acres
1. Football games.....	7	2	.....	.....
2. Playground ball games.....	1,640	1,006	263	7
3. Basketball games.....	180	114	136	27
4. Indoor ball games.....	488	116	84	16
5. Tennis games.....	1,461	139	355	.....
6. Dances.....	152	61	47	37
7. Concerts indoor.....	23	9	21	.....
8. Entertainments.....	21	28	50	1
9. Lectures.....	55	56	31	12
10. Holiday celebrations.....	7	18	38	4
11. Educational gatherings.....	52	3	9	9
12. Socials (no dancing).....	27	77	29	3
13. Open club meetings.....	22	33	.....	.....
14. Average number of clubs using park...	49	51	40	18
15. Average total membership of clubs....	1,358	1,370	1,200	248
16. Total number of club meetings.....	1,338	1,811	1,088	130
17. Dinners or banquets.....	4	1	6	.....
18. Refreshments served at gatherings....	68	49	82	6
19. Track meets held.....	4	6	2	1
20. Band concerts.....	5	5	4	5
21. Play festival celebrations outdoors....	3	6	5	.....
22. Outdoor picture shows.....	11	5	.....	.....
23. Number of children's gardens.....	179	.....	70	.....
24. Registration for men's gymnasium....	1,117	1,353	1,065	632
25. Registration for women's gymnasium...	575	743	680	607
26. Registration for children's playground.	645	425	280	.....
27. Number of books circulated.....	43,844	49,461	20,090	Library Opened Dec. 16, 1912
28. Number of days natatorium was opened	96	100	87	.....
29. Number of days skating.....	42	41	59	New Building Opened June 30, 1912
30. Number of wrestling bouts.....	47	59	29	.....
31. Number of times assembly hall was used.....	355	284	225	126

Of this expenditure as much went for excursions as for parks and theaters together. Three other groups cited by Professor Chapin, with an average income of \$650, \$748 and \$846 respectively, spent a total for recreation each year of \$3, \$6 and \$7.00. The average annual expenditure of eleven Fall River cotton mill families was \$36.43. The annual expenditure for amusements by twenty-one southern cotton mill families was \$22.20.

The amount of money left in the average wage-earner's budget after necessities are provided leaves scant funds for recreation. Municipalities must choose between a citizenry with the vitality and standards expressed by these expenditures and a citizenry strong and effective through play in childhood, wholesome social life in young manhood and womanhood, and wholesome recreation throughout adult life. The worker's contribution and worth to society, and the heavy toll he pays to public expenses through taxes paid in rent certainly entitle him to recreational facilities furnished by himself and his neighbors through the tax rate.

Of the \$17.34 per capita paid in 1912 in cities of over 30,000 for all governmental costs, sixty-four cents went to expenditures for recreation. This per capita expenditure of sixty-four cents included the total expenses of (1) educational recreation, which includes museums and art galleries, zoölogical collections, and conservatories; (2) general recreation, including music and entertainments, celebrations, baths and bathing beaches, and athletics and playgrounds; (3) the maintenance of park areas, including the cost of policing and lighting, and the care of trees in streets; and (4) the operation of quasi-productive park enterprises.¹ In addition to this, twenty-two cents per capita was paid to libraries. In

¹ Financial Statistics of Cities Having a Population of Over 30,000: 1912.

the same year the same cities paid \$2.04 per capita to the police department and \$1.62 to the fire department.¹ The expenditure in smaller cities is under this average. Of the total payments of all general governmental departments in cities of over 30,000, 3.7 per cent. go to recreational facilities, as compared with 11.8 per cent. to the police departments and 9.3 per cent. to fire departments. In the thirty-three "cities" of Massachusetts (their population ranges from 14,000 to 606,000) the per capita expenditure for recreation is eighty-seven cents.²

These expenditures, so inadequate to date, are happily rising to a point where wholesome recreation may yet be provided for all. From 1910 to 1912 the per capita appropriation for recreation in cities of over 30,000 increased from fifty-nine cents to sixty-four cents. In 1903 this appropriation averaged but thirty-four cents per capita.

Adequate recreational facilities necessitate extensive outlays in land, buildings and permanent equipment. In 1912 the cities of over 30,000 spent \$20,729,308 for this purpose, or about 1 per cent. of their total expenditures. The value of parks, playgrounds and gardens owned by cities of over 30,000 in 1910 was \$876,823,501; in 1912 it was \$914,202,571.

These general statements give some idea of how

¹ The amount spent for recreation in cities having a population of over 30,000 is as follows: group I (over 500,000), \$8,596,911; group II (300,000 to 500,000), \$2,498,258; group III (100,000 to 300,000), \$6,947,576; group IV (50,000 to 100,000), \$1,814,996; group V (30,000 to 50,000), \$871,567.

² This includes the following totals:

Parks and gardens.....	\$509,588.52	Memorial day.....	\$27,654.92
Playgrounds.....	47,388.52	Fourth of July.....	29,856.58
Bath houses.....	190,710.40	Labor day.....	3,310.25
Metropolitan park tax....	812,855.33	Miscellaneous.....	177,081.28

"The Cost of Municipal Government in Massachusetts," p. 17, published in 1908.

American cities are trying to solve their recreation problems. The plans and accomplishments of certain cities are far ahead of others. Chicago more nearly provides adequate recreational facilities than any other one city. Her expenditures for outlays in 1912 totaled \$3,500,000 out of \$180,000,000 expended for all purposes. Moreover, such amounts as this she has been spending for many years. Her per capita expenditure for recreation facilities was \$1.23 in 1912, as compared with an average of eighty-seven cents for the nine largest cities in the United States. The outlay and per capita expenditures of other cities in this group reveal that they lag far behind in plan as well as expenditures. Thus Philadelphia's expenditures for outlays were less than \$1,000,000 per annum and her per capita expenditure but fifty-eight cents. New York City, with a far larger population, spent but one-third of Chicago's sum for outlays, while her expenditures totaled but 81 cents per capita. Boston, one of the nine largest cities, spent in 1912 \$650,000 for outlays and \$1.88 per capita. Denver, Colorado, is undertaking heavy expenditures, though these are all too largely for "civic beauty" and for the purpose of attracting tourists rather than for recreational utility for the city's earners.

The cost of the different types of recreation reveals even more clearly than these general statements at what small individual cost recreation can be provided, when provided coöperatively at public expense. The Board of Education of Philadelphia conducted ninety-one school yards as playgrounds during July and August of 1912 at a cost of \$416.17 per playground and at a per capita cost for each time a child used the playground of about four cents, the attendance being 922,622. Ten swimming centers were conducted by this same board at an average cost of \$155.26 per center. Nine school

gardens and 6,295 home gardens were conducted at an average cost of \$802.84 and twenty-six and one-half cents respectively. During the year 1912 the attendance at thirteen supervised municipal playgrounds, other than school grounds, in Philadelphia was 1,371,315, and the cost of operation per child was slightly over four cents, the total money cost of operation being but \$57,149.40. So late as 1906 Philadelphia had no municipal playgrounds. The West Side park commissioners in Chicago conducted fifty-seven band concerts in nine different small parks at a total cost of \$7,235. The South Side commissioners operated eleven swimming pools in 1912 at an average cost of three cents per bather.¹ This cost includes all charges made against the swimming pool account, such as salaries of life guards, attendants and janitors, cost of soap and laundry, and the yearly expenditure for towels, bathing suits, heating and lighting.²

Do these expenditures pay?

This question can be answered by a casual glance at the varied program offered in typical summer and winter weeks in Philadelphia's recreation parks, and by a quotation as to the results observed by the South Park commissioners of Chicago.

A TYPICAL SUMMER WEEK IN A RECREATION PARK IN PHILADELPHIA

9.00 to 9.30 A.M.—Flag raising, patriotic songs.

10.00 to 11.00 A.M.—Supervised gymnastics in the open air.

For older boys and girls, Monday, Wednesday, Saturday.

For younger children on Tuesday, Thursday and Friday.

¹ The total attendance was 632,025 and the total cost was \$18,895.

² "Annual Report of the South Park Commissioners for the Year Ending February 28, 1912."

11.00 A.M. to 12.00 M.—Basket weaving, raffia, singing, games.

On another part of the field: running, jumping and general track and field sports.

2.00 to 2.30 P.M.—Stories and songs.

2.30 to 3.00 P.M.—Open air gymnastics for younger boys and girls on Monday, Wednesday and Friday. For older boys and girls on Tuesday, Thursday and Saturday.

3.00 to 3.45 P.M.—Games of low organization.

3.45 to 4.30 P.M.—Track and field events, such as running, jumping, etc.

4.30 to 5.15 P.M.—Games of high organization.

5.15 to 6.00 P.M.—Occupation work, also team games.

GENERAL ACTIVITIES

Other organized games are played simultaneously with the preceding activities. Baseball with a soft ball is always a favorite.

When school is not in session the playgrounds are open from 9 A. M. to 10 P. M., June 15th to September 8th. Each ground has an elastic and varying program.

All Recreation Parks have leagues of Boys' Clubs which play championship series throughout the summer. A number of excellent team games, such as Captain Ball, Volley Ball, End Ball, Prisoners' Base, etc., have been introduced and have supplanted the old street games in the hearts of the players. A child dropping in at almost any hour may find a game going on. For children under six the wading pool, sand beach and swings are an unwearying paradise.

A TYPICAL WINTER WEEK IN A RECREATION PARK IN PHILADELPHIA¹

3.45 to 4.30 P.M.—Gymnastic classes indoors for boys and girls grouped as to age—every day. The large classes are subdivided under assistants.

4.30 to 5.30 P.M.—A variety of games—athletic and quiet.

¹ October 15th to April 15th. While school is in session. Grounds closed during school hours. Grounds open 3.45 P. M., except Saturday, 9 A. M., closed at 10 P. M.

The winter attendance is very large. Nearly all summer activities are conducted out-of-doors during open winter weather, and the recreation buildings are fully utilized at night and in bad weather.

5.30 to 6.00 P.M.—Running, jumping, sports, etc., ending with shower bath.

7.00 to 10.00 P.M.—Games, clubs, dancing, entertainments.

The South Park Commissioners of Chicago in their report for the fiscal year 1913, state that their park centers have justified their expense by the following results:

“1. There is a bettering of community morals; low dance halls disappear from their vicinity; poolroom hang-outs for young loafers decrease in number; better social practices develop among the people.

“2. Health conditions improve; regular exercise and bathing inculcate right living; health talks give personal knowledge to individuals; instruction to mothers in caring for infants decreases infant mortality; community betterment associations fight for better sewage and general sanitation; the breathing places relieve in hot weather.

“3. Juvenile delinquency is decreased and reformation made easier.

“4. A conscious community spirit is developed.

“5. Community expression through music, dramatics and festivals is made possible.

“6. The joy and value of wholesome play are given to thousands of children who would otherwise grow up without its needed influence.”

ELEMENTS IN A CONSTRUCTIVE PROGRAM

Adequate recreational facilities at minimum costs require the full utilization of neighborhood centers, social settlements, churches, public armories, and the school plant, and the efficient coördination of all recreational institutions and activities. More particularly it requires that land be early set aside for playgrounds, recreational centers and parks.

Land for recreational purposes costs most where most needed. The larger the city, the denser the population, and the greater the social need, the higher is the cost of lands requisite for adequate playgrounds and parks. Thus in Philadelphia, where land values are

lower than in many other cities, the cost or value of one site of one and one-half acres was \$232,000, of another tract of two and one-half acres \$38,000, a plot of seven-tenths of an acre cost \$91,960, while the value of a five-acre playground was \$139,000. The land assets of the South Park commissioners of Chicago totaled in 1912 \$6,230,000. The bonded indebtedness of the West Side Chicago park commissioners in 1912 was \$4,300,000, most of which was for land values. The areas and land costs for certain small parks in Chicago are given in the following table:

<i>Name of Park</i>	<i>Acres</i>	<i>Cost of Land</i>
Bernard A. Eckhart Park.....	8	\$281,926.41
Stanford Park.....	2.89	197,591.00
Dvorak Park.....	3.75	83,873.62
Franklin Park.....	8.26	35,000.00
Pulaski Park.....	3.2	450,508.00
Harrison Park.....	8.24	290,000.00

These land costs make adequate recreational facilities for a city of any size almost impossible within reasonable time. One remedy, effective abroad, and which may be used in the United States, though in many states constitutional amendments would be necessary, is to require the dedication to the public use, in all new additions to the city, of a certain proportion of the land, to be used for playgrounds and parks. This can as reasonably be required as roads, streets and alleys. Planning commissions with compulsory powers can well see that such provisions are made; and cities without adequate powers can, through publicity and request, go far toward securing the desired ends. The only remedy for sections already crowded is the purchase of lands at the earliest possible date.

Self-government in social and neighborhood centers will not only lower costs through the utilization of volun-

tary committees, but will also make those centers more effective. The morality of the twentieth century must have its foundations in self-control to the end that the habits and appetites of individuals shall conform to the interests of public welfare. Censorship and ostracism, the controlling forces in nineteenth century rural morality, must give way to self-control for the larger good. The value of self-government in attaining these ends has already been exemplified not only in such schools as the Allan Dale School and the George Junior Republic, but also in the administration of recreation centers in Chicago and of neighborhood activities in churches. For the administration of assembly halls, for the supervision of dances and play festivals, for equipment and certain expenses, local committees can be put in complete control to the monetary and social advantage of all.

As a rule social settlements and neighborhood houses are utilized as recreation centers about up to their capacity. Social settlements grew out of the desire to escape from the limitations of the upper classes and out of the growing sense, on the part of the educated and wealthier classes, of social responsibility for the economic and social maladjustment of the times. These settlements have invariably begun their work with children, and have reached out from recreational facilities to other social, educational, humanitarian and civic work. These were the first institutions to give opportunity for normal recreation, or indeed recreation of any kind outside of the saloon and the public dance hall.

In every city and community untold thousands of dollars are invested in church buildings and plants which are used to but a small per cent. of their possibilities. These buildings are being, and can be, utilized for clubs and in vitalizing social activities.

According to the "Financial Statistics of Cities for 1912," \$604,394,759 is invested in schools in cities having a population of over 30,000. These buildings and grounds are used to not more than 50 per cent. of their possible efficiency. To attain educational efficiency school buildings are located just where they can be most effective as recreation centers. To them the children are accustomed to come; and few are the social, religious or racial prejudices against them that have not already been overthrown. The symbol of democracy in education, they can, with a slight change in plan and in the attitude of school boards, become the symbol of democracy in recreation as well. The loss to New York City alone through failure to use its school facilities for out-of-school-time recreation has been estimated at \$2,500,000 per year.¹ In the 500 schools in New York City there are invested \$122,000,000; in the schools of all cities over 30,000 \$604,000,000. On the basis of the estimated loss in New York City, the loss to cities over 30,000 would be \$12,500,000. Taking into consideration the cities under 30,000 the annual loss is certainly over \$15,000,000. Our cities can avail themselves of this amount by utilizing their school plants for recreation centers.

And, finally, efficient utilization of the various recreational facilities offered in school buildings, social settlements, churches, public armories, recreation centers, in playgrounds, public parks and buildings and on school athletic grounds, requires a coördination of effort among all of these agencies to the end that overhead charges, janitor fees, heat and lighting and other costs may be reduced to a minimum, and to the end that all these

¹Interim Report of Committees on School Inquiry, Board of Estimates and Apportionment, City of New York, 1912-1913, p. 52.

facilities may be fully utilized. Through such coördination and coöperation all the recreational facilities of every community can be used to their maximum efficiency.

Social foresight and collective expenditures, coupled with individual initiative and a democratic spirit, can give recreational facilities to all city dwellers, to the definite enhancement of their happiness, well-being, vitality and earning power.

CHAPTER XVI

ELEMENTS IN A CONSTRUCTIVE HOUSING PROGRAM

The housing problem is a pertinent question to 100 per cent. of our population; to 80 per cent. of our urban population it is a menacing question, menacing because so closely related to health or ill-health, to moral growth or decay, to proximity or non-proximity to employment, and to the adequacy or inadequacy of the family income after the rental costs have been paid. Housing conditions in growing cities, even at the best, are ever in the process of being solved. They are never solved. It is the rapid growth, past and prospective, in American cities that makes the question of housing costs pertinent to urban stability.

In Chapter I some of the facts as to the growth of the urban population in the United States, particularly during the last decade, have been recounted. It was not pointed out, however, that practically one-fifth of our total population (18.59 per cent. to be exact) is concentrated in metropolitan cities covering only one-fortieth of our land area;¹ while 30 per cent. of our population (29.76 per cent.) living in cities of over 30,000 are centered on land area equal to but 12 per cent. of the total land area in the United States.

The land area of the United States is sufficient to allow each person over twenty acres each. Yet nearly one-

¹The area of metropolitan cities is 1,185,796 acres, or .026 per cent. of the 1,903,289,600 acres in the United States.

third of our population live on the average of about twelve to the acre. There are in the United States as a whole 5.2 persons per dwelling. In the urban states the average is 6.1 (6 in the New England states and 6.2 in the Middle Atlantic states), as compared with 4.9 in the other sections.

General averages as to the number of people per acre in no wise express the amount of actual congestion in cities, for the very simple reason that urban districts include many homes surrounded by a large acreage as also a large percentage of undeveloped land held by speculators for a rise in price. Housing congestion is further necessitated in practically all American cities because of the inexcusable concentration of industrial plants in restricted areas so that the earning people, to save expense and time in reaching their work, naturally tend to crowd together in relatively small portions of the city.

Over two-thirds of the people of New York City live in multiple dwellings, including over 100,000 separate tenements, one-tenth of which are of the hopeless and discredited dumb bell type. Three million of these people, reported Mr. Lawrence Veiller, in his book on "Housing Reform," published in 1910, are living in 80,000 buildings "so constructed as to be a standing menace to the community in the event of fire, most of them built with wooden stairs, wooden halls and wooden floors, and thousands built entirely of wood." "In one small portion of Manhattan Island, the district south of Fourteenth Street and east of Broadway, dwell over 500,000 human beings, a population in itself greater than the entire population of any other American city except Chicago, Philadelphia, St. Louis, Boston and Baltimore; a population greater, indeed, than the population of each of the following states: Arizona, Delaware, Idaho, Montana, Nevada, North Dakota, Oregon, New

Hampshire, New Mexico, Rhode Island, Utah, Vermont, and Wyoming."

Mr. Veiller also points out that "Over a million people have no bathing facilities in their homes; while even a greater number are limited to the use of sanitary conveniences in common with other families, without proper privacy; over a quarter of a million people had in the year 1900 no other sanitary conveniences than antiquated yard privies; and even to-day 2,000 of these privy sinks still remain, many of them located in densely populated districts, a source of danger to all in the neighborhood, facilitating the spread of contagious disease through the medium of the common house-fly."

Nor is such congestion typical of large cities only. In Washington, D. C., some 11,000 persons live in alleys under conditions of health and morality that are a disgrace to the national capital.

But mere elimination of congestion is by no means the consideration of first importance in assuring adequate housing facilities. Conditions of living, access to fresh air and recreation centers, accessibility to steady employment, the number of persons per room, the amount of sunlight, the character and extent of sanitary conditions, rental costs, in short, the effect of housing conditions on productivity and upon moral, social and physical well-being—these are the tests of the adequacy and justice of a city's housing conditions and facilities. Judged by these tests, the shanties in the less populated districts along the river in Kansas City, Missouri, or along certain railroad tracks in Denver, or in the small mining towns of Colorado and Pennsylvania, offer more serious housing problems than do the congested districts of large cities in which there are monster, yet properly constructed, apartment houses.

THE COST OF POOR HOUSING CONDITIONS

The high death rate from tuberculosis in the crowded alleys in Washington, D. C., causes not only a drain upon the industrial resources of that city through the death rate and incapacity of the workers in that particular section, but is an ever-present menace to all the inhabitants of the city. This condition accounts in large measure, no doubt, for the fact that only nine of the fifty largest cities in the United States have a higher death rate than does our national capital.

The *Municipal Journal* of March 13, 1914, published in London, contains a statistical study showing the relation between mortality and overcrowding and other housing conditions: "In England and Wales, as we have already seen, we are met by the perplexing fact that, excluding London, we have a population of 3,139,472 persons occupying some 430,910 overcrowded tenements; and we find that, taking the country as a whole, there are upward of 9 per cent. of the private population living under overcrowded and unwholesome conditions.

"From this general outline of the extent of the overcrowded tenement problem we now proceed to examine the price paid in human lives for this trespass upon the limits set up and demanded by Nature for the maintenance of a proper standard of general health and longevity. We learn from the official mortality returns that this general death rate in single-roomed tenements is 32.7 per 1,000. In the case of two-roomed tenements the death rate drops down to 21.3, a difference of 11.4 as between the one- and two-roomed tenement. If we take the three-roomed death rate we get 13.7, but when we arrive at the luxury of a four-roomed tenement we get our death rate down to an average of 11.2.

"These figures are startling, and prove that there is nearly 300 per cent., or say about three times a greater chance of life in the four rooms as against the one-room tenement, and it has, in fact, been conclusively proved by the examination of official statistics that, in a general way, it is immaterial what part of a town or city one may take for the purpose of analysis it will be found that the single-room death rate is usually a third higher, and invariably higher by anything from 9 to 16 per 1,000, than is the death rate for the remainder of the ward or of the city as a whole."¹

In the shacks and hovels of Kansas City, Missouri, the infant mortality is five to seven times that of other districts. A study of two contrasted districts in Cleveland showed that, in the first, made up mostly of comparatively new houses, practically all of which were maintained in a sanitary condition, the death rate from tuberculosis was 28 per thousand, as compared with a death rate in the second district, where rents were no higher but where the houses were old and insanitary, of about 52 per thousand. In the first district the number of contagious diseases was three per thousand, as compared with an average of 18 per thousand in the second district. In Edgbaston, one of the suburban sections of Birmingham, England, the general death rate is 13.1, as compared with a death rate of 31.5 in the overcrowded Floodgate area in the middle of the city. The weight and stature of boys and girls of a given age, according to a study made in Glasgow of 72,857 school children belonging to families living in one, two, three or four rooms respectively, varied directly with the number of rooms occupied by their families. Further statistics are not needed to reveal that for care-

¹"*The Municipal Journal*," London, March 13, 1914, p. 321.

lessness in housing the city pays heavily in its toll of death, disease and physical incapacity.

It does not follow, to be sure, that a density of 4,000 per acre means, *ipso facto*, a death rate ten times as great as a density of 400 per acre. A modern, sanitary apartment, surrounded by open spaces, with an interior yard of such proportions and arrangements as will give adequate sunlight to every living room, may be more healthful for housing purposes than a dozen shanties on a country lane with improper sanitary improvements and surroundings, or than a block of two-story houses in Philadelphia where, as is still occasionally the case, the only sewer is the open street.

But the big fact is that housing conditions and physical fitness are so closely related that no city interested in its productive powers, its future welfare or living costs dare ignore them. If to the low rents paid under improper housing conditions were added the amounts paid by the taxpayer for regulative, remedial and punitive institutions, it would be seen that the rents, thus made up in part out of the taxpayer's pocket, were actually higher than under wholesome conditions.

One-half the children born to colored mothers resident in the congested alleys of Washington, D. C., are illegitimate, as compared to the illegitimacy of one-fifth of the children born to colored mothers resident in houses facing the streets. The total rate of illegitimacy in the city as a whole is 10.3 per cent. Propinquity without privacy means immorality. From out of poor housing conditions spread vice and degraded morals just as surely as from out of such conditions spread death and debility. Normal living costs to all are inseparable from normal housing costs for all; and a virile morality can spring only from wholesome homes.

Poor housing conditions lead inevitably to the sweat

shop and sweat shop prices. For poor housing conditions mean low standards and low standards mean low wages. A dilapidated house betokens a dilapidated earning power, and the former is as much the cause as the result of the latter. The nation that wants a lower class of incompetents and inadequates need but perpetuate the housing conditions of incompetents and inadequates; and, conversely, capable, independent earning power can come only out of an environment that of itself inculcates such standards. Better housing conditions mean better standards and better standards mean better wages.

HOUSING COSTS

As is the city's earning class, so is the city. If this be accepted as sound doctrine, then the city must interest itself in what the earner's rent money buys. For wages are increased when their purchasing power is increased. What the money wage of the laborer is is not so important as what that money wage can buy. There are then two vital questions: (1) what does the average wage-earner pay for rent, and (2) what does that rental money buy him? "Rent is the price one pays for the shelter he gets, plus the conveniences that aid healthy living, produce economic efficiency, and facilitate wholesome sociability."¹

Only one out of every five of the residents of the larger cities own their own homes. But these very home owners are often paying unnecessarily high costs for their housing facilities. The *better* residence districts, to be sure, are well planned, well supplied with public

¹ Bernard J. Newman: "Congestion and Rents," *The Annals of the American Academy of Political and Social Science*, January, 1914, p. 60.

utilities and thoroughly restricted so that the well-to-do purchaser gets his money's worth. "The location of outbuildings; the fronting of residences; the exclusion or control of business property and other injurious surroundings; the elimination of billboards; provision of free space between the houses for air and sunshine; the establishing of building lines; provision of more room for garden, grass, trees, flowers and shrubbery; the perpetuation of restrictions; abandonment of the obsolete alley; requiring of minimum costs of residences in the varying sections, and frequently the control of the architectural design and exterior color scheme of the residence, as well as the grading plans of the lot, are carefully thought out and made a requirement in every part of the development."¹ But such is not the case with the *modest* city home owner.

"In every American city to-day," as has been pointed out by Mr. J. C. Nichols, "the poor man in reality buys the highest priced property on the market. He usually buys his property absolutely unimproved, seldom with even the street brought to grade. Frequently his water mains are inadequate in size, simply being small pipes laid by the aggressive real estate owner, merely large enough to enable him to advertise 'city water.'

"This property is ordinarily sold without any building restrictions as to the use of the property. Livery stables, laundries, undertaking establishments, coal yards, slaughter-houses, breweries, stone quarries, foundries, hospitals and factories of all descriptions may be located on the adjoining tracts. A neighbor may decide to face his house on the other street and place his foul smelling barn and his pile of manure immediately ad-

¹J. C. Nichols: "Housing and the Real Estate Problem," *The Annals of the American Academy of Political and Social Science*, January, 1914, p. 132.

joining the laborer's modest home. Frequently this little home may find itself lined with privies on either boundary line.

"The lot may be so narrow that the sun may never shine between the homes. The lot may be so small that the children of this workingman may rarely have the joy of grass, flowers, gardens, trees, or shrubbery upon their lot, while this is the particular class that, from economical reasons alone, should have the garden opportunity for at least growing vegetables for their own daily use.

"Probably no provision has been made at the time of platting the ground for any public playgrounds in that section of the city; and the only possible way that they may be later secured is for the playground or park commission of the city to condemn a section of this dearly bought property and assess the costs to these already burdened lot or home buyers.

"Real estate dealers and owners of to-day are not alone responsible for this condition. It has become the established custom in most cities and there has been little evidence of public sentiment to the contrary against it, and this class of buyer will require considerable education along these lines. Certainly, however, many of the safeguards given the better residence property could be given in the same degree in proportion to the laboring men's homes." ¹

According to the census of 1900 but 46 per cent. of all the families in the United States owned their own homes, and half of these homes were mortgaged. These ratios include rural dwellers. From three-fourths to four-fifths of urban dwellers are home renters. They must adapt themselves to what is provided for them by some landlord whose sole interest is a maximum return

¹ *Ibid.*, pp. 134-38.

on a minimum investment. The result is that the poorer classes—and this is always the case where there is no public regulation and restriction, and it is the case to a large extent even with such regulation and restriction—are paying relatively more for what they get than does any other class.

How are housing costs to be kept at a minimum? And how can a community make sure that its citizenry are getting full value from housing expenditures, measured not only in terms of rooms, but in healthful, moral and comfortable living conditions?

MINIMUM HOUSING COSTS

The factors that determine housing costs and the adequacy of returns for those costs are: (1) accessibility to steady employment; (2) accessibility to educational, social and recreational centers; (3) sewage, water, lighting, transit and other utility facilities; (4) the building restrictions and regulations as to the use to which such residence properties can be put; (5) the type and facilities of the building, including air, light, sanitary conditions, fire protection, etc.; (6) the cost of building materials, including financing and banking costs, legal service, promotive, engineering, and architectural costs, and the cost of skilled and unskilled labor; (7) the plan and construction of the house so as to give adequate fire protection and fire prevention at minimum maintenance costs; (8) the cost of the land.

Such are the main elements entering into housing costs. How can maximum housing advantages and facilities be assured at minimum costs?

The avenues and agencies through which adequate housing programs have been and can be realized are:

(1) efficient housing regulation and adequate public supervision; (2) housing ownership and operation by the public authorities; (3) public control of land values through land ownership and land taxation; (4) proper town planning, including transit and other utility facilities, with costs shorn of watered stock and other imaginary values; (5) an industrial readjustment that will minimize non-employment and further the movement toward decentralization in urban populations; (6) encouragement of home ownership through coöperative organizations and minimum building costs.

Philanthropic movements and organizations were not named as one of the avenues and agencies through which permanent housing results can be secured. To be sure, individuals and organizations with philanthropic motives may assure the erection of model tenements, and contribute in other ways toward ameliorating conditions. The Octavia Hill Association of Philadelphia, which now owns 143 houses for 192 families and controls, as agent, more than 209 houses for 432 families—a total of 624 families in property worth about \$700,000, has demonstrated that builders can, with profit, erect good homes in Philadelphia at a rental of thirteen dollars per month. Paternalistic and quasi-philanthropic industrial villages have been built, such as Gary, Pullman, and Fairfield, and housing plans have been made by the United States Steel Corporation at its new plant at Duluth, by the Goodrich Tire and Rubber Company at Akron, and by the American Rolling Mills at Middletown, Ohio. Some garden cities have been promoted by corporations, including the movement by the Russell Sage Foundation at Forest Hills, Long Island, which have proved profitable to the corporations and have demonstrated that industries thrive best with well-housed employees.

But all these attempts affect at the best but a slight portion of urban houses; and the air of charity that enmeshes them makes their value as "models" all the more questionable. Philanthropy, to be worthy of the name, and charity, if it be done with an honest motive and not as a cloak to hide a multitude of sins, must begin with better wages and the cessation of usurious profits. The philanthropist of old who collected wealth without conscience, whether by paying poor wages to his employees, or charging higher prices for his goods, or giving inadequate service to his patrons, and who doled out that wealth in the sweet name of charity, must now be classed as a pharisaical hypocrite. The new philanthropy looks for the causes of the social maladjustment under which it is possible for one man to command the resources for building thousands of homes while thousands of earners are unable to build their own homes. True philanthropy does not aggravate social evils with palliatives.

HOUSING REGULATIONS

The prevailing method of securing better urban housing conditions is the setting-up of minimum standards by statutes or by ordinances and the enforcing of those standards through housing bureaus. This is America's distinctive contribution to housing betterment. Dr. Nemenyi of Budapest, sent here by the Hungarian government to study America's methods of dealing with the housing problem, in a recent interview said: "New York's tenement laws and their enforcement have no parallel anywhere in Europe. New York's handling of the tenement problem is, to European eyes, unique, admirable, impressive. Conditions in the worst of your

tenements are vastly better than in the worst of Europe's. Your laws have produced this superiority."¹ After a four weeks' study of New York's tenements in all parts of the city, Dr. Nemenyi stated: "The overshadowing feature of the New York tenement situation is the kind of laws you have and the way you force obedience to them.

"Your tenements as a whole are far better than those of Europe, while your slums are not nearly as bad as those of many cities in Europe. Of course there are tenement house and building laws in Hungary and Europe generally, but they are not such laws as you have. They do not protect the health and lives of dwellers in the tenements as do yours, and it is for this reason that Hungary wishes to revise her laws along American lines."²

The standards usually provided for in housing codes relate to the minimum amount of light, air, sanitary conveniences, safety, privacy, extent and percentage of area that can be built over, the height and structure of buildings, floor space per occupant and measures to assure fire protection. Such legislation has been passed by the states of New York, California, Connecticut, Massachusetts, New Jersey, Pennsylvania, Indiana and Wisconsin. At least eighty-two of the larger American cities provide more or less stringent regulations in their housing codes. Housing codes are carried to even greater extremes in certain foreign cities, such as Berlin, where the highest building permitted is five stories, thus making it unnecessary for business men to buy their light and air through getting control of neighbor-

¹Lawrence Veiller: "Housing Reform Through Legislation," *The Annals of the American Academy of Political and Social Science*, January, 1914, p. 70.

²*Ibid.*, p. 70.

ing ground that skyscrapers may not be built thereon.

The housing problem is not only the problem of enabling the greater number of people who want to live in decent houses, and who want to bring up their children in decent environments, to do so. It is also the problem of forcing the careless and indifferent so to house themselves as not to be a menace or nuisance to others. But more than this, the housing problem is the problem of getting landlords to forego certain types of profit, for in no other way can all tenants be assured of decent and sanitary living conditions. Legislative control, enforced and supplemented by administrative authorities, is, therefore, a vital part of every well considered housing program. These methods alone will remove privy vaults, build sewers, put windows into dark rooms, assure water conveniences for every floor and privacy for every household, abolish cellar dwellings, erect fire escapes, limit the area that a block can be built upon, assure courts, demolish insanitary shacks and loathsome back alley lodgings, and protect wholesome homes from the contamination of the morals and diseases of near-by insanitary and disreputable tenements. Negative standards must precede constructive ones.

Housing legislation in New York City has eliminated 245,000 dark rooms, so that but 75,000 still remain. Furthermore it has made certain that minimum sanitary and hygienic standards have been enforced in the 22,925 tenements erected in that city from 1902-1912, at an estimated cost of \$709,000,000, accommodating one and a quarter million persons. And it has forced the remodeling of old tenements to meet the new standards. The tenement houses built under the supervision of New York's Tenement House Department during the first decade of its existence (1901-1911) now shelter over

one-fourth of the tenement population. Of the 82,923 old buildings, 32,308 were compelled to conform to the requirements of the tenement house law.

While such are the results that have been secured in New York City alone by housing legislation, yet from that same city can be taken numerous instances to show wherein housing legislation and regulation fail. The report of the Tenement House Department of New York for 1909 draws a comparison between the three-story tenements that are under the tenement house law and the two-story houses that are not included in the legal definition of a tenement house. "In the three-story buildings all of the rooms have windows opening on the street or yard, the hallways are light and adequate and fire escapes are provided. In the two-story houses there are usually two sleeping-rooms without windows or other means for light and ventilation. The hallways are commonly dark and no fire escapes are provided. Although the two-story flats rent at a higher rate than the three-story ones, the latter are greatly to be preferred from a sanitary and esthetic point of view. The one complies with recognized standards, while the other is constructed to make dividends for the landlord."¹

In other words, housing legislation and its proper enforcement and administration mend or end certain existing ills aimed at particularly by the law, and prevent the arising of the same ills in the future. These limited results, however, it must be pointed out, are assured only through a fearless interpretation and enforcement of the statute. A strong public sentiment must uphold the commands of officials in order to counteract the pressure brought by landlords and builders.

And thus, while direct housing legislation is essential

¹Pollock and Morgan: "Modern Cities," p. 54.

to the attainment of even minimum standards, it is not the panacea for housing ills which some have claimed for it. It does not, however, as its opponents would have us think, necessitate higher rentals, nor threaten confiscation of profits. Improvements in housing conditions do not necessarily mean higher costs to the renter; nor need they mean lower profits to the landlord, unless those profits are so defined as to include returns on fake capital, such as happens when sham fire escapes are erected and inadequate plumbing installed. A recent study made in Philadelphia showed that, for 1,332 houses, "where the average cost of improvements approximated from six to eight months' rentals, only on 8.4 per cent. were the rents increased, while in 1.2 per cent. instances they were reduced."¹

Housing legislation does not reach the causes of poor home construction nor the high costs of home maintenance. No program for housing reform can secure permanent results that does not get at these causes.

Some of the causes of high rentals and poor housing conditions which housing legislation does not affect are: land speculation and the unearned increment in land values; the increased cost of materials; the power of monopoly to extort its own prices; congestion through ineffective planning of cities, such as the adequate control of the number of houses to the acre; the improvement of streets; transit and other utility costs and conveniences; the location, stability and efficiency of industries; the wage and its purchasing power. Nor does direct housing legislation promote home ownership.

¹ Bernard J. Newman: "Congestion and Rents," *The Annals of the American Academy of Political and Social Science*, January, 1914, p. 66.

PUBLIC OWNERSHIP AND OPERATION

Leading English, German, French, Belgian and other European cities have with marked success secured model home conditions for their workers through the construction and operation of buildings by municipal authorities.

Most of the operations were begun by condemning and tearing down insanitary dwellings in slum areas, purchasing the land on which these dwellings stood, laying out new streets with all modern accessories, and then the rebuilding, at public expense, of model, sanitary homes, to be rented thereafter by public authorities. The London County Council has thus expended large sums in building city tenements. Glasgow, over forty-five years ago, purchased a densely populated slum section in the central part of the city, demolished the old buildings, and erected new ones in their stead, to the very definite improvement of housing conditions among the city's earners. Liverpool, since 1864, has spent \$5,575,000 in the demolition of insanitary dwellings and the building of improved dwellings in their stead.

Liverpool to-day owns 2,174 dwellings, containing a population of 8,000 persons, every one of whom has been turned out of a cellar or an insanitary or overcrowded house. The city charges rents approximating what the people paid before they were ejected from the old, insanitary dwellings; the city is thus carrying its housing scheme at a loss of around \$110,000 a year, as compared with an expenditure of \$1,000,000 a year on parks, museums, libraries, baths and hospitals. In certain European cities public funds can be borrowed for the building of workingmen's dwellings. In some cases, up to 80 per cent. of the total cost of the home can be forwarded to the worker and the rates of interest are fixed at from

2 to 4 per cent. The city of Cleveland is the only American city that has thus far undertaken the building of homes at public expense.

These ventures, it must be understood, do much more than merely eliminate insanitary houses and build model houses at low rents in their places. Built on a large plan, and more effectively located than could be similar undertakings of a philanthropic character, whether by individuals or organizations, they set the standards which private builders must to a large extent live up to. This method, therefore, will often prove the most effective means by which cities can raise their housing standards. Public housing schemes are especially to be commended for the poor who cannot afford to rent the better private accommodations. They pay adequate returns to the city, both financially and socially.

It has been urged that European cities can enter upon such ventures because their courts have not narrowed the power of condemnation for public purposes, as in the United States, to land absolutely essential to the public use. A closer study, however, will reveal that the real difference between American and European cities in this respect is not so much in their powers as in the use of their powers. Moreover, sustained effort in America can remove the constitutional limitations in the way of a freer use of the power of eminent domain for "excess condemnation."

The condemnation of land and buildings and the reconstruction of new tenements thereon have certain disadvantages. The hundreds of renters in the condemned buildings must find homes elsewhere in the interim. The result is that rents in near-by private buildings are higher for the time being. Many cities, therefore, with control over their utilities and over their city plans are buying up suburban land and building modern working-

men's houses thereon. Under this plan land costs are less, there are no hardships during replacement and there is greater freedom in planning the city and in erecting single, isolated buildings rather than multiple buildings. Moreover, land values in other suburban sections are in this way indirectly controlled. The movement toward the suburbanization of the wage-earner is thus given a happy impetus. Ulm, in Germany, offers an example of a city that has purchased large tracts of suburban land and has erected thereon cottages and cottage flats. From 1891 to 1909 this city has purchased over 1,200 acres under full restrictions for \$1,633,000. Cottages are erected and sold to workmen on easy terms or the workmen may rent them if they prefer.

CONTROLLING LAND VALUES

But no housing program is adequate that does not include control of land values.

Mr. Frederic C. Howe has given the following example of the growth of unearned increment in New York City: "The whole of Manhattan Island was first sold to the Dutch by the Indians for \$28. In 1904 the land values of Greater New York were appraised for taxation at \$3,057,161,290. By 1906 the land had increased in value to \$3,391,711,526. By 1907 the appraised value of the land underlying the city had advanced to \$3,557,591,504, or an increase over the year before of \$165,879,978. In 1908 the valuation had still further increased to \$3,843,165,597, or an increase of \$284,271,643."

Dr. Scott Nearing in a pamphlet entitled "The Increase of American Land Values" cites the following increases in land values: "Land in Newark, N. J., increased from \$122,904,000 in 1907 to \$141,059,000 in

1912, an increase of \$18,155,000 in five years. Land in Dallas, Texas, increased in the same five-year period from \$16,477,000 to \$44,605,000, an increase of \$28,128,000. In Houston, Texas, land values have risen from \$19,787,000 in 1904 to \$61,389,000 in 1912, an increase of \$41,602,000 in eight years. In Seattle, Washington, in the seven-year period, from 1905-1912, land has increased in value from \$70,038,000 to \$212,929,000, an increase of \$142,891,000."

The assessed valuation of real estate in the Borough of the Bronx increased in value, due to the building of subways, from \$226,600,000 in 1903 to \$616,600,000 in 1912, an increase of 173 per cent. in ten years. The properties in West Philadelphia increased in value 127.6 per cent. from 1900 to 1912, due to the building of an elevated-subway.

It needs no argument here to show the need for controlling land values if housing costs are to be kept at a minimum. One fact should be sufficient and that is that these land values have been created in the main by society and not by the individual owner. Moreover, these "unearned" values, immense as they are, are not created out of thin air as many would have us think. They represent the contributions made up of the pennies of the poor and the dollars of the well-to-do, expressed in high food prices (because the land is unimproved or unused, or held at speculative prices that prevent its being used for agricultural purposes), in high rental prices, in transit costs, and in the high cost of all goods due to the high rentals that must be paid in congested centers. It is the number of people passing a given plot of land at a given time that creates urban land value, and the passing of people is not due to the "initiative" or the "genius" or the "efforts" of the landlord.

Three means have been adopted for controlling land

values: (1) public land ownership; (2) public regulation of the uses to which land can be put; (3) taxation (a) of unimproved land and (b) of the unearned increment; the single tax has also been sparingly adopted.

"The medieval town was surrounded by a wall to keep the invaders out," points out Professor Eberstadt, of Berlin, "while the modern industrial city is surrounded by a wall of land speculators who keep the people in." Ground values treble or quadruple themselves during a seventeen-year period, whereas an investment at 4 per cent. only doubles itself in that time. Now this increased land value is due more to conscious municipal activities and unconscious social growth and tendencies than to any activities on the part of individuals. This fact certain cities have realized and have, therefore, begun to reap this enhancement in prices for their own treasury through the ownership of land within and without the city. This has been peculiarly true of German cities. Mr. Frederic C. Howe, in his "European Cities at Work," gives the following facts as to municipal land ownership in Germany (pp. 97 and 98): "Berlin owns land to the extent of 240.8 per cent. of its total area, including the area owned outside of its boundaries. Frankfurt owns 48.9 per cent. of the land within its limits. Ulm owns 80 per cent.; Mannheim, 35.4 per cent.; and Hanover 37.7 per cent. of the land within its boundaries. The table on page 258¹ indicates the extent of land ownership both within and without the city, of a number of European cities, for the policy of municipal land ownership is not confined to Germany.

This tendency toward public ownership of land is growing rapidly. German cities are constantly adding to their possessions. "Between 1890 and 1902 the city of Cologne increased its holdings by 1,269 per cent.

¹ Howe: "European Cities at Work," pp. 97-98.

	Total Area of City Acres	Total Amount of Land Owned by City Acres	Proportion of Total City Area	
			With- in City, Per cent.	With- out City, Per cent.
Berlin.....	15,689.54	39,151.28	9.2	240.8
Munich.....	21,290.24	13,597.02	23.7	37.8
Leipsic.....	14,095.25	8,406.84	32.3	27.4
Strassburg.....	19,345.45	11,866.98	33.2	281.1
Hanover.....	9,677.25	5,674.90	37.7	20.4
Schoeneberg.....	2,338.60	1,633.33	4.2	65.1
Spandau.....	10,470.37	4,480.79	3.05	42.9
Zurich.....	10,894.64	5,621.52	26.0	25.9

During the same period Chemnitz added 605 per cent.; Munich, 334 per cent.; Dresden, 290 per cent.; and Mannheim 254 per cent. to their previous possessions. In ten years' time Berlin added 21.52 square yards of land per head of its population, notwithstanding its increase in size."¹

The wisdom and advisability of public ownership of land hinge definitely upon the question as to whether land values will increase more rapidly over a long term of years than the interest on the investment necessary to purchase the land. The undertaking is therefore peculiarly commendable to cities whose growth is rapid and whose future growth is assured. For static cities it is not so commendable unless it is undertaken as the means for effective planning and for the building-up of a city which will attract and keep capital and workers.

The second method of controlling land values—the determining of the uses to which land can be put—has

¹ Howe: "European Cities at Work," p. 96.

found its fullest fruition in German cities, and in other cities where there is effective and judicious town planning. Factories must locate on the side of the city away from the prevailing wind and in places where the city can or will assure adequate water, steam and other distributing facilities. The territory near these factory districts can then be dedicated to workmen's homes, with the area well laid out so as to give ample provision for all utility facilities and for parks, playgrounds, markets, terminals, streets and recreational facilities. Canals, waterways, railways, belt line roads can all then be effectively located under public control with the view of creating a community efficient industrially, and with wholesome living conditions. The uses to which land can be put can further be limited so as to prevent congestion of traffic, overcrowding and an indiscriminate mixture of buildings of different classes.

Four kinds of taxation have been and can be used to redistribute land values. These are: taxation of unimproved land, a heavier tax on lands than on buildings, taxation of the unearned increment only, and the single tax.

Many continental cities, and more particularly German cities, place a higher tax on vacant land than on improved lands, thus tending to stimulate building and to discourage ownership and control of land for speculative purposes only. By assessing land at its fair value and improvements thereon at 25 per cent. of their value, Houston, Texas, claims to have materially reduced rent throughout the city and stimulated building operations.¹

Under the unearned increment tax, a percentage of the increase in land values is taken either at stated intervals or as an incident to the transfer of title. The

¹ See *The American City*, September, 1914.

former is the German, the latter the English method. The percentage usually taken varies from 10 to 25 per cent. In other words, if the land has not increased, or if it has decreased in value, no unearned increment tax is paid; but if it has increased in value a small proportion of that increase flows into the city treasury. It is urged in favor of the plan of having this tax collected as an incident to transfer of title that it will be borne more definitely by the landlord without opportunity of shifting it to his tenants.

A pertinent objection to the unearned increment tax is that, if a portion of the increase in land values should flow into the city treasury, the city should also make up to the land-owner in a similar ratio any decrease in land values. This argument can be met only by pointing out that the unearned increment tax applies solely to those lands into which have flowed exceedingly large social values—values which in the ethical sense properly belong to the community. In other words, the unearned increment tax is a payment for the right to keep the more profitable places, made profitable by social and municipal action, and is, therefore, an attempt to distribute the harm done to other land-owners by the location of tunnels, restrictions as to the use of land, etc. The unearned increment tax, judged by its social benefits as well as its economic returns, is probably at once the most just and the most advisable tax that can be levied by American legislators.

The shifting of all taxes to land, and the entire exemption from taxation of buildings, personal property and of all private property save land—in other words, the single tax—has had many advocates. It is evident, however, that this tax is not adapted as yet to American customs. Even if it were theoretically, the American method is to get at such things experimentally. Hence

the wiser and safer step is to begin with the unearned increment tax.

CITY PLANNING

The many can never be decently housed in unplanned cities. Unplanned cities become stratified into mansions and slums, with the slums dominating civic life and social well-being. So closely are housing and planning interrelated that there can be no effective housing program that is not a part of a well considered city plan. The cost of a planned city can be definitely estimated in dollars and cents; the cost of the planless city must be measured in physical, social and industrial inefficiency, waste and incapacity.

Upon the city plan depend the adequacy of the recreational system, the sufficiency of the sewers, the purity and cheapness of the water supply, the cost and service standards of gas and electricity, the adequacy and correlation of the transportation system, the width of streets and their industrial effectiveness, the number and character of open spaces, the depth of the block, the percentage of the block built upon, the height of houses, the location of industries, the accessibility of employment, the beauty and wholesomeness of the neighborhood, the extent of congestion, the value of land and the relation to markets and to the educational and commercial sub-centers of the city.

The zone system is a characteristic method used by German cities, in specifying the uses to which land can be put. Mannheim, for instance, "is divided into three building zones. In the first zone, or business district, 60 per cent. of the land may be covered by structures which must not exceed five stories in height. In the next outer zone 50 per cent. of the lot area may be built upon,

while the structures may not exceed four stories in height. In the outlying sections three stories is the limit, while a smaller percentage of the land may be built upon.

"In the business district of Frankfort 75 per cent. of the land may be covered by buildings, which may not exceed five stories, or more than 65 feet in height. In the second outer zone buildings may be four stories high, but never higher than the width of the street. In the third suburban zone two stories is the limit.

"The building ordinances of Cologne provide that 25 per cent. of the land must be left free in the business section, 35 per cent. in the next two outer zones, while in the suburban residence section only 50 per cent. may be built upon. In Berlin the height of buildings in front is limited to the width of the street, with a maximum of 70 feet. The height may be increased to 72 feet if the structure is set back from the building line."¹

The districting of Boston into four zones, for the regulation of the height of buildings, has been upheld by the United States courts. Acts to authorize the adoption of the zone system have been introduced in Wisconsin and California. Thus the idea is already being adopted in American cities.

Closely related to planning is the vital connection between housing and the efficiency, availability and cost of the city's public utilities. Upon transportation facilities depend the ease, rapidity and flexibility of commerce and the facility and cost of getting to profitable employment. The simple mathematical rule that doubling the radius quadruples the area points out the effect the extension of the transportation system has upon the areas available for housing purposes. European cities, particularly German and English cities, have realized, as American cities have never realized, the social value of

¹ Howe: "European Cities at Work," pp. 101-102.

furnishing gas, electricity and other utilities at or very near the actual cost of providing them. A case in point is the cheap gas and adequate facilities furnished English workers by municipal gas undertakings in England. Even the cooking stoves and other facilities are rented at a return but little above replacement values. Conveniences at reasonable costs within the home, coupled with recreational facilities without, greatly enhance the attractiveness of life to the English worker.

No city plan is complete that does not include adequate provisions for the location and encouragement of industries. The factors and forces affecting industrial development are: (1) shipping facilities; (2) transit and other utility facilities for workers; (3) the cost of fuel or availability of water power; (4) character of, and facilities for securing and handling, raw material; (5) price of land; (6) stability, efficiency and contentment of labor.

A critical analysis of these several factors will show the intimate relationship of all of them to housing and city planning. Shipping facilities depend upon the location of terminals, the service by train and by boat, the existence of adequate transshipping machinery. The factory owner includes in the actual wage his laborers receive the cost to them of getting to and from their work and also the cost and adequacy of the other municipal utilities such as gas, electricity, water, etc. All these are vital factors in the actual wage; and the employer must interest himself in the actual as well as in the nominal wage received by his employees.

Well planned cities can locate industries so as to be available to near-by water supplies and can so plan their shipping facilities as to definitely lower fuel costs. The public control of the uses to which land can be put, if accompanied by the setting aside of sufficient quantities

for industrial purposes, will easily bring land values down to the point favorable to the location and operation of industries.

Propitious to town planning and the efficient location of industries is the rapid decentralization in city populations as evidenced by the reports of the last census. From 1900 to 1910 the population of cities of over 200,000 increased 33.2 per cent. within the cities proper as compared with an increase of 43 per cent. in their outlying districts. Residential and industrial communities within fifteen miles of American metropolitan cities occupy over three times the amount of territory within those cities while accommodating but little over one-fourth the number of people. During this same decade the increase in the population of Philadelphia was 127 per cent., as compared with an increase of 199 per cent. in the near-by county of Delaware, formerly almost exclusively an agricultural county.

This tendency toward decentralization, furthered by the desire of manufacturers to get out where lands are cheaper, and by the rapid extension of interurban and other transit lines, is a potent factor in increasing the room space per tenant in the congested sections of cities, in doing away with the common use of halls and stairs, and in the increase of the social and economic conveniences purchased by the rent money of the urban citizen. Not only should the renter get more for his money through this decentralizing movement, but the cities themselves will be saved heavier expenses for the enlargement of sewers and water mains, for heavier costs for fire protection such as high pressure pumps, for increased costs in police supervision, health regulations, building inspection, added street lights and more intensive traffic regulations essential to congested city populations.

While this movement is thus propitious for better things, it portends ill, indeed, unless the American cities are given and exercise large powers not only for ameliorating conditions within the city limits, but also for planning areas which must either commercially or geographically be annexed to them at no distant time.

NON-EMPLOYMENT MINIMIZED

Coupled with this movement for cities well planned for homes and for business facilities, can go a readjustment in industrial life that will materially lessen non-employment. A poignant factor in poor housing conditions is casual and chronic unemployment. He who is casually or chronically without employment sooner or later must "economize" in his housing quarters. We have too often looked upon this kind of unemployment as, to use the phrase of a Kansas statute, "An act of God or other sudden disaster," rather than a social condition which can be changed by conscious, individual and community action. To be sure, there will always be eras of hard times, but such eras have little to do with the subject in question. The non-employment spoken of here is that due to improper or unscientific organization of industrial establishments and to such abuses as those characteristic of certain textile factories where a larger number of men are kept on the rolls than can possibly be employed, in order to squeeze out competitors. A typical method is to keep on the rolls say 1,000 men and use but 800, either by laying everybody off one, two, three or four afternoons, or telling certain of the men to report from day to day. It is said that an average workman in the printing business loses 25 per cent. of his time; in some cases there is employment for but 28 weeks out of 52.

To meet this situation is a problem for efficiency and management rather than for supine acquiescence. It can be met in many ways, all of which are now being used by a portion, albeit too small a portion, of factory managers and business men, the most efficient of whom are coming to see that continuous changes in personnel involve loss of their own time in teaching new trades to new people and thus ultimately lower the factory or business output.

The first step in the reduction of non-employment is to teach employees to do more than one thing. As Mr. Morris L. Cooke, Director of the Department of Public Works, Philadelphia, has pointed out in a recent article, there is no reason why employees should not be taught as many things as they are capable of learning. This scheme may be made a part of that procedure which the labor unions hold to be best adapted to promote the prosperity of the worker. Mr. Cooke also points out in this same article that unemployment can be definitely lowered by a closer relationship between selling and manufacturing departments. "The attitude should be," he says, "that both the selling and manufacturing arms of a business should have like opportunities but like responsibilities. The selling force should be so organized that it can keep the manufacturing side going, so that day to day, week to week, and month to month fluctuations in the number of employees do not occur." Still another method of preventing this unemployment pointed out by Director Cooke is the manufacturing of special goods during dull times. This is especially applicable to such concerns as shoe factories. "In one shoe concern they have a special department, which, during dull seasons, makes standard lines at a somewhat reduced cost. These goods are disposed of through special selling agencies and are manufactured

only in order to equalize the load and to keep men employed when otherwise they would be laid off." Trade in special foreign fields is also in keeping with this idea. Still other business concerns are employing a factory nurse on a business basis, the sole purpose being to eliminate the number of "days off" through colds, minor accidents and preventable disease.

Employment agencies are also of value, though their relative importance, as compared with certain of the other factors herein mentioned, has been exaggerated. It is upon the employer that the responsibility must rest. Mr. Cooke himself in 1913, when 600 men were thrown out of employment in the city of Philadelphia, sent out letters to employers throughout Philadelphia and succeeded in getting work for a large number of these laborers. Similar responsibility assumed by other employers of labor will definitely diminish the burden, social and economic, which all must bear, due to chronic or casual unemployment.

Standardization in method and operation will enable employees to go with greater ease from concern to concern. Standardization thus means mobility and not immobility as so many have argued. And, finally, there must be recognition, by established custom, of the right of the industrial worker to participate in determining the conditions of his work.

HOME OWNERSHIP

Under such conditions as these, the laborer can look forward to permanent employment in his own community and can afford to own his own house, while the public will find it worth while to invest time and money in regulating housing conditions. With cities efficiently planned, their industries permanently located and encouraged

through proper public facilities, and with the elimination of all needless casual and chronic unemployment, the home owner will not be, as he too often is at the present time in American cities, under greater pressure than the non-owner to accept wage reductions, or under greater stress than the non-owning population during hard times. With permanency in home-making conditions, the flat built for speculative profit will give way to the home built for utility and social returns.

Numerous methods have been in use for the encouragement of home ownership through making capital available at lower interest rates and for securing the labor and utility facilities essential to conducting housing operations on a scale sufficiently large to keep costs at a minimum. Three means used to attain these ends are: homestead aid, the limited dividend company, and the co-operative building association.

Homestead aid has been supplied by the various mutual banking institutions, although as yet it has not been so developed as to allow participation by urban residents in wholesale developments for workmen. The limited dividend company has been in operation in this country for a number of years, usually with the rate fixed at 5 per cent. "Up to the present time twelve or more companies have erected some eighteen hundred or more houses and as many tenements in the United States. Several additional companies have recently been organized, so that the movement is evidently spreading. These are stock companies similar to any real estate company, except for the dividend limitation. They either rent or sell for cash or instalments. Speculative profit is eliminated, the surplus going into improving the property or reducing payments. But the residents, as such, have no voice in the affairs of the company; and the creation of new companies depends entirely on outside initiative of a

philanthropic or altruistic nature. In England most of the garden suburbs have been organized as limited dividend companies on a 5 per cent. basis, there being at present twenty-one companies, which have already erected over 9,000 houses on 2,400 acres and propose to expand over 10,000 acres, with a total of 37,000 houses.¹

The third method is that of the coöperative building associations. American building and loan associations, which have total assets of \$1,137,600,648 and a membership of 2,516,936, are typical American agencies for attaining this end. In other countries coöperative housing associations have been formed to even a larger extent and with more definite results.

From returns published in 1902 by the Coöperative Union, it appears that 334 coöperative societies in Great Britain have built 37,267 houses for their members at a cost of about \$40,000,000 (£8,127,155).

It should go without saying that accompanying such local measures must be national legislation lifting tariff burdens from building materials. In the appended footnote is given a statement recently made by Mr. E. P. Wheeler, Chairman, Law Committee, National Civil Service League, and Chairman, Committee American Bar Association, on "Remedies for Law's Delay," in an article in *The Annals*, July, 1913, as to the burden which tariff reductions lay upon housing costs.²

¹ Arthur Coleman Comey: "Copartnership for Housing in America," *The Annals of the American Academy of Political and Social Science*, January, 1914, pp. 140-141.

² "Some years ago I had occasion to build four tenement houses in New York City. I found that there was a tariff tax upon all the materials that entered into the construction of the houses: stone, brick, lime, plaster, the lead pipe and the brass work of the plumbing, the hardware of the windows and the doors, the tin plate with which the roof was covered. In short, not one item that went into those houses was on the free list. I made a

The housing question need not be a menacing one. On the contrary, American cities can offer to all their workers housing conditions that make for a wholesome physical and social outlook at reasonable rentals.

computation of the effect of this tariff tax upon the cost and found that I could have built five houses for the same money if it had not been for the tariff tax upon the materials which composed them. . . . Had I been able to build five houses instead of four, I should not have charged any more rent for the five than I was obliged to for the four. In other words, the rent of each apartment, if I had built the five houses, would have been one-fifth less."

CHAPTER XVII

EDUCATIONAL COSTS VERSUS EDUCATIONAL RESULTS

The national expenditure for education in 1911 was \$446,726,929. This represents an increase of 214 per cent. since 1890, in which year \$140,506,715 was expended for this purpose. In other words, the amount spent on education in 1911 was three times as great as that spent in 1890, and twice as great as that spent in 1900. During the same twenty-one-year period (1890-1911) there was an increase of 40 per cent. (from 12,722,581 to 18,035,118) in the number of pupils enrolled.

In 1870-1871 the per capita expenditure (total population) for education was \$1.75; in 1910-1911 it had increased to \$4.76. The per capita expenditure per pupil in average attendance was, in 1870-1871, \$15.20; in 1909-1910 it was \$33.33.¹ The per capita expenditure for schools in all cities over 30,000 in population was, in 1912, \$5.01, as compared with a per capita expenditure of \$0.35 for health and \$2.04 for police.

The per capita costs (1910) for the various classes of schools are: (1) elementary schools, \$22.67; high schools, \$47.13; normal schools, \$158.34; universities, colleges and professional schools, \$303.48. The estimated total cost of public elementary schools is \$383,127,609; of public high schools, \$43,122,825; of normal

¹ While the per capita expense doubled during this period, the number of pupils actually present trebled, increasing from 4,545,317 in 1870 to 12,827,387 in 1910.

schools, \$14,022,749; and of universities, colleges and professional schools, \$76,497,293.¹

Such are our educational costs. What are the results? The total sums appropriated to education cannot and should not be lowered. But can we get better results from the money expended?

To judge the efficiency of our educational system requires the setting-up of standards by which that efficiency shall be tested.

Eighty-five per cent. of those in attendance at our public schools later earn their living through industrial processes. One of the tests of the adequacy of the results obtained through our present educational system must, therefore, be the kind of livelihood earned by those who have for a greater or less time been under its influence.

A recent study made by the Public Education Association of Philadelphia shows that, out of 13,740 child workers, fourteen to sixteen years of age, in that community, 37 per cent. of the boys and 49 per cent. of the girls were employed in factories. The percentage in each occupation for both girls and boys was found to be as follows:

¹ Some idea as to the increase in attendance and enrolment in schools of the United States may be gleaned from the following facts: In 1890 there were in the elementary schools 13,610,533. In 1910 the number had risen to 18,339,828—an increase of 34 per cent. The greatest increase in enrolment occurred in the secondary schools, where an increase from 367,003 (1890) to 1,131,466 (1910)—226 per cent.—took place. In the higher schools the number of pupils rose from 135,242 in 1890 to 340,628 in 1910—an increase of 153 per cent. Another large increase took place in the enrolment in universities and colleges. In 1890 there were 64,472 receiving university and college training. In 1910 the number had increased to 184,712—an increase of 186 per cent. in twenty years.

<i>Occupations</i>	<i>Number</i>	<i>Per Cent.</i>
Store.....	2,793	20.3
Office.....	1,200	8.7
Messenger.....	346	2.5
Factory.....	5,968	43.4
Street trades.....	214	1.5
Skilled trades.....	422	3.0
Service.....	168	1.2
Housework.....	1,756	12.8
Miscellaneous.....	873	6.3

But more important than the kind of work is the remuneration received for their work. This same association found that the 80 per cent. of Philadelphia's public-school pupils who did not go further than the high school entered "low-grade industries, untrained, unguided, unguarded, where they average between \$4 and \$4.50 per week while at work; where they jump from job to job, with consequent loss to the industry and to themselves. By eighteen they have reached their maximum wage, and by thirty they begin to go down hill."¹

Such facts as these, crowding in as they do from every section of the United States, show all too conclusively that our schools are turning into, or are allowing to go out into, our industrial establishments at least four out of every five of the public-school pupils with no foundation in skill, with no definite knowledge as to earning a livelihood, and with all too little foundation in health, and in moral and economic standards. Over 60 per cent. of the males at least sixteen years of age in the United States are earning less than \$626 per annum, having to feed, clothe and shelter themselves and their families on this income. This fact is a sad commentary alike on the efficiency of our educational system and on the justice of current conceptions of wealth distribution. Nor are conditions worse in the United States than in

¹ James S. Hiatt: "Vocational Guidance."

other countries. It is alleged that 30 per cent. of the residents of English cities are dependents on less than six dollars a week. Industrial prosperity, if that prosperity is to include all, cannot exist while such conditions prevail.

Mr. James M. Hodge presented at the New York meeting (December, 1903) of the American Society of Mechanical Engineers a paper¹ dealing with the money value of technical training. In this paper an analysis was presented giving the actual progress in earning power made by four groups of men working in the mechanic arts: first, the unskilled labor group; second, the shop-trained or apprentice group; third, the trade-school group; and fourth, the technical school group. He capitalized the annual earnings of each of these groups at 5 per cent. in order to get at the potential invested value of each class of workers upon which interest is drawn on pay day. The unskilled labor group reached at the age of twenty-two their maximum income of \$10.20 per week, which, capitalized at 5 per cent., gave to each laborer a potential or invested value on which he drew interest on pay day of \$10,000. The shop-trained group reached their maximum average at the age of twenty-four, at \$15.80 per week, giving to each laborer a potential value of about \$15,500. The trade-school group rose rapidly in income power up to the age of twenty-five, when the income was \$22 per week, or an invested value per laborer of \$22,000; but as the income of this group continued to increase up to the age of thirty-two, the final potential value was \$25,000. The technical school group reached their maximum income at the age of thirty-two, with \$43 per week, giving them a potential value of \$43,000.

A comparison has been drawn of the wages made by

¹See Volume 25 of the Transactions.

2,000 Massachusetts boys, one thousand of whom went to work at the age of fourteen, the other thousand remaining in school until eighteen years of age. At the age of twenty-five the first group received on an average of \$12.75 per week, while the second group was receiving on an average of \$31 per week. The boys of the first group were making \$4 per week at fourteen, \$7 at eighteen, \$9.50 at twenty, \$11.50 at twenty-two, and \$12.75 per week at twenty-five; while the boys of the second group were making \$10 at eighteen, \$15 at twenty, \$20 at twenty-two, and \$31 at twenty-five. In other words, the investment of say \$5.50 per week in board, carfare and clothing for four more years of school training netted an average amount of \$18.25 per week after seven years in industrial life.

The low wages received by those without school training, and the higher wages received by those with an effective school training, point both to the inadequacy of our present educational régime, and to the great value that will accrue to the individual and to society through a more effective and efficient educational system.

To be sure, efficiency in education is not the only step needed in order to secure a living wage for those who work and a monetary reward for all workers in proportion to their productive power. But these ends cannot be gained without educational efficiency. Something more than increased efficiency may be needed to insure increased wages. But certain it is that there can be no sustained increase in wages save through a sustained increase in productive power. While society is readjusting its wealth-distributing forces and conceptions, so that just rewards may be given to workers, as measured by what they produce, the schools must lay the foundation for increased earning power among all earners.

The test of power to earn a living is not the only test of school efficiency. The second test, equally important, is the personal power gained in school years through knowledge and insight into contemporary industrial conditions and social institutions. The school stage of life, to be sure, is not the only time when a child is being socialized. In pre-school days are laid the foundations for his standards of ethics and his conceptions of his own rights and the rights of others. At this age he learns through suggestion and imitation, precepts and prohibition, to adjust himself to the social and economic standards of his family and his immediate environment. But school days introduce to the child the standards, customs and institutions of his community as a whole. Upon the school, therefore, must rest the responsibility for inculcating standards of stability and self-reliance; for teaching such facts as the right of each individual to a full share, and no more, of the wealth he creates; and for teaching such fundamental facts about social customs and social institutions as will prepare the child for being at once an efficient producer and a helpful member of society. If goodly foundations are laid during the school stage, further growth and power both as a producer and a citizen follow naturally through all life.

Judged by this test, our schools, while far ahead of other social institutions of the day, are still encumbered with the inertia of past ideals and needs.

It must be remembered, however, that it is a difficult task to present current social institutions in their true light, so warped do they seem by current controversies and conflict. But the difficulties to the proper presentation of the subject only emphasize all the more the need for their presentation. If it is difficult for the teacher to evaluate the industrial and social institutions of the

day, how much more difficult it is for the school child to get his own bearings in such a wilderness.

The evidences of the failure of the schools, and not only of the schools but of other social institutions as well, to inculcate adequate conceptions of citizenship are to be found in the willingness of men to sacrifice community needs to their own greed and pecuniary advancement. The citizen's obligations are currently construed to mean merely his obligations to vote and to write to his congressman. But citizenship includes all the attitudes and relationships involved in earning a living and being a member of society. The school, the church, the family and other social institutions cannot be said to be doing their full duty so long as men can steal from their city treasury in the manner politely called graft and still be thought of as decent citizens, simply because through stolen goods they can purchase country residences, servants and the other trappings of social superiority. He who revels in profits gleaned from his power to exact monopoly prices from public utilities or other interests is yet to be classed with the pirate who overpowers unarmed vessels on the high seas. The school must be more than a place set aside to learn lessons; it must be a place set aside to learn the limits to greed and self-aggrandizement and to learn the power and sense of gratification that come with accepting an aggressive share of responsibility for current maladjustments in the economic and social world. This lesson once learned, the taxpayer's money will no longer have to go in such large measure for the enforcement of pure food laws, for the regulation of quasi-public corporations, for punitive and remedial institutions, for the repayment of graft and for the countless other burdens that uncontrolled greed annually levies upon society. The heart of every true educator warms as he

realizes the rapidity with which the schools are now accepting this new responsibility.

The cultural test is the third test that can be made as to the adequacy of our current educational system. The cultural test includes the command of expression in speech and in writing, the ability to read thoughtfully and with appreciation, a taste for good literature, the ability to collect and organize material, and such a general command of the best in the educational field as to make life ever richer in content and meaning. Judged by this test, the schools have still much to accomplish. A sub-committee of the general educational committee of the National Association of Corporation Schools addressed an inquiry to eighty-two of its corporation members, asking, among other things, the particulars in which the training of the public school pupils was found to be inadequate as evidenced by the work of those pupils coming into employment direct from school. The fifty-one corporations that answered found public-school training to be inadequate in the following particulars:

Reading

Writing

Arithmetic

Geography

Spelling

Punctuation

Concentration

Application

Definite knowledge

Accuracy

Knowledge of commercial needs

Ability to converse properly

Courtesy

Articulation of speech

Initiative

Discipline

Coördination of the theoretical and the practical

Training in exact habits

Ability to follow directions

General information

Thoroughness

Analytical and reasoning ability

Postal regulations

The fourth test of educational efficiency from the point of view of productive power and living costs is the facility with which the school students "find" themselves when seeking employment. Little need be said as to the efficiency of our educational system when judged by this test. The daily family budgets of our working classes speak more eloquently of the school's failure here than can any number of statistics. It cannot be too often repeated that for these conditions the school is not alone responsible. But that the school must bear its share in moving away from such conditions there can be no doubt.

He who grows pessimistic when testing educational efficiency by social results needs for encouragement to turn to the strides the schools have already taken and to the constructive measures now under way, through which ultimately the efficiency of the school system, even on the basis of present money expenditures, will be vastly increased. A survey of what is being done will indicate, at the same time, what more can be done.

Of the steps being taken to secure better educational results for the money invested, the first to be noted are those pertaining to schoolroom efficiency and effectiveness. Schoolroom budgets are being systematized and reduced to a basis of unit costs so that efficiency can be measured and expenditures and results intelligently com-

pared. Better training is being demanded for teachers, and the training of teachers is more and more including the fundamentals in the social sciences. School "jobs" are no longer the rightful spoils of the politician. The subject-matter of textbooks is being overhauled as never before and the laboratory is being introduced from the kindergarten to the graduate school of the university. Educators are translating into schoolroom action the old axiom that the child whose mentality is being overworked through textbooks is no better off than the child whose physical vigor is being sapped in the factory. Segregation of the subnormal child on the one hand, and the abnormal child on the other, coupled with individualization in the teaching of all children, is taking heavy burdens from the teacher and giving a happy stimulus to application by every child in the schoolroom. Even in the university stop-watches are being used to ascertain the time the professor spends in talking, as compared with the time given to the students for self-expression. Age-progress-health-mentality-tests are being applied for promotions and grade classifications so that the schoolrooms of to-day, especially those in which there are semi-annual promotions, are no longer places where only the average child finds work suited to his needs and possibilities. Clearing-houses for efficiency tests and pedagogical methods are weeding out the mediocre and preserving the best in educational devices. Time cards are being used, not so much to gauge how the teacher spends her every minute, as to ascertain the amount of time devoted to the various studies and activities of the schoolroom, in order to weigh their relative value and merit.

Through compulsory education laws and through the rehabilitation of schoolroom activities, pupils are being retained under school influence sufficiently long to be

fundamentally affected by it. The result is that the child of to-day (1910) is in school twenty-four days more per year than was the child of 1870.

The cultural work of the schoolroom is being and can be further improved by a change in the content of school books, by thorough spelling tests, by using "little classics" for reading matter, by relating the reading and instruction of the classroom to the topics and institutions of the day, by enriching the school curriculum while keeping it simple enough for assimilation; and by making instruction definite and useful.

The indictment made against the school by Professor Dewey in his book on "The School and Society" that, "upon the ethical side the tragic weakness of the present school is that it endeavors to prepare future members of the social order in a medium in which the conditions of the social spirit are eminently wanting" is no longer true of the best of modern schools. Through instructions in morals, through history so taught as to give meaning to social institutions, through making geography a study of the institutions and customs of other races and the products and industries of other climes rather than a mere study of the "sailor" geography of names and things, through the laboratory method of teaching civics, and, in the higher grades, through courses in the social sciences, the leading modern schools are equipping their pupils with a knowledge, at once useful and practical, of the social institutions and industries of their own times—a knowledge that will write new and larger meanings and greater productive power into the later years of a work-a-day world. The need and meaning of social institutions are being emphasized through an extension in student self-government, a movement that has reached even a few of the universities. Organized play and coöperative efforts in recreation centers and in

the classroom are teaching power through coöperation and individual strength through group action.

This new point of view is well expressed by the chairman of the committee on social studies ("History, Civics and Economics") of the commission appointed by the National Education Association on "The Reorganization in Secondary Education":

"It is probable that the high-school teachers of social studies have the best opportunity ever offered to any social group to improve the citizenship of the land. This sweeping claim is based upon the fact that the million and a third high-school pupils are probably the largest group of persons in the world who can be directed to a serious and systematic effort, both through study and practice, to acquire the social spirit.

"Good citizenship should be the aim of social studies in the high school. While the administration and instruction throughout the school should contribute to the social welfare of the community, it is maintained that social studies have direct responsibility in this field. Facts, conditions, theories, and activities that do but contribute rather directly to the appreciation of methods of human betterment have no claim. Under this test the old civics, almost exclusively a study of government machinery, must give way to the new civics, a study of all manner of social efforts to improve mankind. It is not so important that the pupil know how the President is elected as that he shall understand the duties of the health officer in his community. The time formerly spent in the effort to understand the process of passing a law over the President's veto is now to be more profitably used in the observation of the vocational resources of the community. In line with this emphasis the committee recommends that social studies in the high school shall include such topics as the following:

community health, housing and homes, public recreation, good roads, community education, poverty and the care of the poor, crime and reform, family income, savings banks and life insurance, human rights versus property rights, impulsive action of mobs, the selfish conservatism of tradition, and public utilities. . . .

"History, too, must answer the test of good citizenship. The old chronicler who recorded the deeds of kings and warriors and neglected the labors of the common man is dead. The great palaces and cathedrals and pyramids are often but the empty shells of a parasitic growth on the working group. The elaborate descriptions of these old tombs are but sounding brass and tinkling cymbals compared to the record of the joys and sorrows, the hopes and disappointments of the masses, who are infinitely more important than any arrangement of wood and stone and iron. In this spirit recent history is more important than that of ancient times; the history of our own country than that of foreign lands; the record of our own institutions and activities than that of strangers; the labors and plans of the multitudes than the pleasures and dreams of the few."

The following course in civics has been evolved by Dr. J. Lynn Barnard for the Philadelphia School of Pedagogy, in order to meet the needs for acquainting the students, through a laboratory method and a study of social forces and facts round about them, with the social life in which they must take a part:

"In the practice school (fifth to eighth school years, inclusive) of the Philadelphia School of Pedagogy, the following tentative course in civics is gradually evolving, with evident interest to both pupil and teacher.

"In the first half of the fifth year a beginning is made with the child's common experience within his home and his school. Gas is the first subject taken up informally

and the children are encouraged to tell what they know about it and its uses. The teacher guides the conversation so that it naturally leads to the question of where we get our gas. The gas pipe is traced through the house to the meter and then to the street. When it is learned that the gas is manufactured at a central plant the children are encouraged to visit it, with teacher or parent, and the result of the visit is a letter or report on what was seen. In like manner the subjects of electricity, water, sewage, and the telephone are considered. After the service of the community to the child has been shown with each of the above, the reciprocal duties of the child to the community are brought out by careful questioning, which follows the lines of the pupils' own observation and experience.

"In the second half of the fifth year what the child sees by looking out of the window, at home or at school, is drawn upon for material. For example, the policeman, the fireman, the postman, the street sweeper, the garbage collector, the ash collector, are severally taken up in the manner already described, never omitting a possible trip and report or forgetting to emphasize the corresponding duties of citizenship resting upon the young citizens of the class.

"During the early part of the sixth year some of the educational institutions of the city are visited, such as schools, playgrounds, parks, libraries, museums, historical buildings and localities. Later in the year visits are made to the various public institutions, such as city hall, bourse, custom house, mint, armories and arsenals, hospitals, and juvenile court. No regular textbooks are used in the fifth and sixth years, but much supplementary material is introduced by the teacher to aid in the interpretation of what has been observed on the various trips. Among other suitable reading books, special men-

tion ought to be made of Richmond and Wallach's 'Good Citizenship,' and Hill's 'Lessons for Junior Citizens.' By the close of the sixth year the pupils have acquired a fund of first-hand civic information and experience of a concrete and practical nature, no attempt having been made to generalize or to discuss political rights or duties from a legal standpoint. In fact, the word 'government' is not even used; only the more general term 'community.'

"In the seventh year more attention may safely be given to the end and aim of governmental activity and the way in which public and private agencies unite to accomplish results. For the purpose no better introduction can be found for Philadelphia girls and boys than the beginnings and growth of community action in their home city. They will see how various civic functions, such as street paving and cleaning, and water supply, at first performed by each householder for himself, were gradually taken over by each municipality and performed for all alike. This concrete example of community growth leads naturally to a discussion of the meaning of 'community' and 'citizenship.' The important truth is impressed upon the pupils that they are now citizens of various communities, namely, the home, the school, the playground, the church, the city, the state, the nation. The family and the home as factors in this community life are particularly emphasized, that the children may rightly appreciate the civic importance of the home. Then follows the story of the making of American citizens out of a constant stream of foreign immigrants, both as to naturalization itself and as to the educative process that may fit the strangers into their new city environment. A series of studies is next undertaken to find out how the community aids the normal citizen in relation to life, health, property, working and

business conditions, transportation and communication, education, recreation, religious worship. This is naturally followed by a brief study of how the community takes care of its subnormal citizens, usually referred to as the dependents, the defectives, and the delinquents. Emphasis is placed upon the idea of prevention, or of restoration wherever possible. Poverty, vice and crime are coming to be recognized as social diseases. This is a fact which every boy and girl should be made to feel. As each function is discussed, the organization of the city government to do this community work is outlined, with frequent reference to the Philadelphia charter and to ordinances of councils. Careful consideration is given to the coöperation of private agencies with various municipal bureaus and departments, that the pupils may see how community and citizen work together. How the city gets its money to do all it does is briefly explained.

"By the time the eighth year is reached the pupil has become so thoroughly grounded in the governmental activities of the city that he is ready to be taken into the larger field of state and nation. During the first term the work shapes itself as follows: first, how the community aids the normal citizen in his desire for health, security of person and property, business opportunity, education; and second, how the community provides for its unfortunates, by means of charitable and penal institutions. This includes some consideration of the simpler forms of business law and practice, and also some of the commoner types of criminal offenses and the method of their repression and punishment. The governmental organization—legislative, executive, judicial—back of these activities is sketched in outline, both as to selection and control of state officials, not forgetting to discover where the money is found to keep the machinery going. During the second term of the eighth

year the pupils learn, as fully as the time permits, how the federal government looks after the varied needs and interests of a hundred million citizens and subjects, at home and abroad.

"While the study of municipal government is going on, the class is organized on the plan of the Philadelphia city government, so far as practicable, and then according to the commission plan and by an easy transition, when state and national governments are reached, the class takes on those organizations respectively. This will be recognized as different from the well-known 'school city' plan in that the class is organized for purposes of instruction and not for purposes of self-government.

"For the seventh and eighth years a helpful textbook has been found which admirably illustrates the newer civics, Dunn's 'The Community and the Citizen.'

"It will be observed that throughout the last two years, when the more serious study of civics is being attempted, the order followed is invariably that of the child's own interest and appreciation, namely, from function to structure, from the executive department which does things to the legislative which plans the things to be done and the judicial which interprets and helps enforce those plans; and then, if necessary, to the charter or constitution which lays down the legal powers and duties of each branch of government.

"Moreover, the possibilities for coöperation between the community, acting through government, and the citizens, young and old, acting singly or in voluntary associations, are never lost sight of. How great is this departure from the solemn farce of practically memorizing the federal Constitution—now in vogue in the city of Penn and elsewhere—can best be appreciated by those teachers who are anxiously awaiting deliverance

from bondage through long-overdue revision of their prescribed course of study.”¹

As are civic habits, so are civic conditions. It is in the formation of right civic habits, therefore, that constructive work must be done. All else is ameliorative at the best. Such constructive work can be done most effectively only in the school stage of life. The inculcation of civic habits that will preserve and sacrifice is the basic step in any permanent stability in urban life.

The tendencies and activities of modern schools through which the school children of to-day can become more largely independent, resourceful, capable producers of to-morrow are: (1) conservation of health; (2) adjustment in curricula, including vacation, night, continuation and vocational schools; (3) reorganization of secondary schools; (4) the democratization of higher education.

In another chapter is given in detail what schools are doing and can do to extend the years of productiveness and years of productive powers through health conservation. Physical examination of school children; hygienic practices in the schoolroom and on the playground; restriction of study hours at home and in school, so as to insure a reserve of energy; free dispensaries for the needy; proper construction of desks; scientifically arranged schoolrooms; wholesome lunches at or near actual cost; corrective gymnastic exercises; proper presentation of physiological and hygienic facts—through these and other means, the city child of to-day is being made as strong physically as his country cousin and is being armed to combat disease and inertia through all his adult years. These methods will ultimately affect living costs by prolonging and increasing purchasing power.

¹ Bulletin 41, United States Bureau of Education, p. 16, ff.

Vacation schools, first adopted as part of the regular school system of Newark, N. J., in 1885, were originally held for the purpose of giving to the children of the streets opportunity for more wholesome living and for interesting study under competent direction. They are also used now for the purpose of preventing retardation in grades with all its attendant ills to the child and his classmates and for the purpose of giving to the more capable students opportunity of advancement to a grade where work is sufficiently difficult to necessitate intensive application.

In night schools child workers are given opportunity to perfect themselves in the regular grammar, high-school and commercial courses, while taking special instruction in the practical arts, such as dressmaking, millinery, drawing, chemistry, and in the vocational courses particularly fitting them for their daily work. Continuation schools have much the same end in view.

Vacation schools are making day schools more efficient, while night and continuation schools are conserving to large numbers of children an educational training they could otherwise never avail themselves of; and these are the very children who would later do the work of the unskilled and poorly paid.

Through vocational, trade, manual training and continuation schools, as they are variously called, our educational system is tending to send the young out both more adequately equipped to make a living and better acquainted with contemporary life and institutions. No longer are these functions left to chance or to casual guidance by parents. Heretofore the children of our hand- and machine-working classes left school early for the reason that their parents could see little advantage in school training after the children had learned to read, write and cipher a little. The want of adaptation of ac-

tivities of our grammar grades and high schools to industrial needs has filled our shops with foreign skilled labor and turned American school children into unskilled trades with almost as little knowledge even of these as any foreigner could have. For this American industries have suffered. Adaptation to industrial needs was given its first real impetus in this country through manual training schools. The advocates of this class of schools found support among the psychologists and leading educators who appreciated the need for and value of a "motor" and physical as well as mental training. Then the human interest in this new curriculum attracted students who would have otherwise dropped out of the schools entirely; attendance was more regular and interest sustained. The theories that such training taught accuracy and self-control, because any defect in the process was obvious in results, were borne out in practice. Educators had long recognized the value of teaching by doing and by objective methods, but the traditional school system still continued to overemphasize the purely mental part of school training, so that to get the best educational advantages a child had to be deaf, dumb, blind, feeble-minded, incorrigible or a truant. And most wholesome in its social effects was the inculcation in manual training students of a respect for manual labor and an intelligent interest in the skilled trades.

Ninety per cent. of the public-school pupils later go into some branch of industry or business. This big fact is finally forcing educators to the realization that there ought to be less of a break between the schools and the vocations later followed by the bread earner. Hence out of the manual training school movement is coming the movement for trade schools.

Personal efficiency requires an income, to meet twentieth century living standards, of at least ten dollars a

week. The school must do its share in making the children of to-day the efficient producers of to-morrow. And this means that the minimum standard must be a ten-dollars-a-week wage for the public-school graduate. To society human resources are more valuable than natural resources, and to the business man himself employee value is more vital than property value. The recognition of these facts will reorganize our educational systems so that there will be a training of the senses as well as of the mind and so that the pupil through simple processes will be brought in contact with the best in our social and industrial life. Thus the general education of the child can be continued while his industrial proficiency is being attained.

The trade school has had its highest development in Prussia. The American Association of Commerce and Trade of Berlin has recently issued a report as to Prussia's trade schools, which runs as follows:

"In 1884, 664 continuation schools, including 58,400 pupils, were under the jurisdiction of the Administration of Commerce and Trade, and the number has since increased to 1,719 trade schools and 381 commercial schools, with a total attendance of 360,000 pupils. Besides this the number of special schools has increased from 56 with 8,000 pupils to 204 with, in all, 44,300 pupils. Although in 1885 about 570,000 marks were spent by the Government in supporting these schools, in 1910 the money granted for the same purpose amounted to more than 13,000,000 marks, apart from 4,500,000 marks for supplies. . . . The German Trade Department described the importance of these schools in the following words: 'Their purpose is not alone to act through the instruction imparted, but to form a foundation for other institutions providing for the welfare of the younger population.' "

One stock objection to trade schools deserves the serious consideration of all interested either in democracy or industrial efficiency, and that is that trade schools tend to make artisans and not citizens and that adaptability and ambition are educated out of trade-school students. The alert business men of to-day, appreciating the value of the long-term employee, are endeavoring to so organize the various departments of their work that most of their employees can be taught a number of trades or functions and hence be readily transferable from one department to another. If this adaptability is advisable from a business point of view, it is trebly advisable from a social point of view. While acquainting pupils with the trades and industries of their communities, trade schools must fit them for efficient work in any vocation they may later choose. Industrial democracy is essential to social or civic democracy. Thus trade schools with a proper perspective continue the courses in science, in literature, in civics, in history, and are so planned as to be of value to both the employer and the employee of the future, so planned as to lead toward mobility in earning power and in industry.

Two present-day tendencies in the industrial world will prove to be powerful allies in perfecting the work of trade schools. One of these is the movement toward the standardization of the operations of the office, the store and the factory; the other is the so-called corporation school.

The Department of Business of the National Education Association has appointed a committee to standardize clerical and office operations and methods. The standardization of machine parts by manufacturers and motion studies by students of scientific management are both leading toward uniformity and simplicity in industrial processes.

Operations and processes so standardized and simplified will be as useful when taught with the cultural view as when taught with the utilitarian view. Thus the trade school can at once prepare efficient workers and a citizenry well equipped with industrial information.

With these foundations, the corporation schools, such as are being carried on by the National Association of Corporation Schools, will then have the simple task of acquainting the graduates of such trade schools with the needs of their specific businesses. Large corporations or stores, either singly or in groups, can render and are rendering with slight expense these services for themselves on their own premises. For the assistance of the small factory owner and business man, the public-school building can be utilized; and, if the demand warrants it, the instruction staff as well can be taken from the general educational staff. The New York City Board of Education last year conducted the first factory school in this country. The employer allowed the students of this school, "Public School No. 4," three hours a day with full pay for their studies, which were in charge of a public-school teacher.

These school readjustments will not only create a more efficient earner and a higher type of citizenry, but will eliminate the social losses now accruing through "dead enders." One-half the pupils leave school before the eighth grade. There are now in the country approximately 3,000,000 children who are in "dead-end" jobs earning on an average of two dollars a week with slight hope of future advancement. The president of the Wisconsin State Board of Industrial Education recently said: "There are in Philadelphia to-day some 18,000 children under fourteen who are out of school and engaged in 'dead-end' employment. These figures are not peculiar to Philadelphia. Every city has the

same problem. It is safe to say that one-eightieth of the population of any representative industrial city is made up of boys and girls between fourteen and fifteen years of age who are utterly useless factors in the economic world. New York has 90,000, and Boston 12,000." Mr. H. E. Miles, Chairman of the Committee on Industrial Education, appointed by the National Association of Manufacturers, said recently in an address at Buffalo, N. Y.: "Here in Buffalo some 4,500 little children, fourteen years old, break out of your school doors because the law says they don't have to stay in school after that age. On leaving they are unable to use their bodies, minds and hands in a good human way.

"You have approximately 9,000 children between the ages of fourteen and fifteen on the streets, idle or in a blind alley, hopeless and with no prospect of betterment. In New York there are 80,000 such children."

On such figures as these Mr. Miles bases his conclusion that the value of human resources going to waste in the United States is between \$200,000,000,000 and \$250,000,000,000 annually. Certainly this means a call to greater efficiency on the part of our public school system.

Vocational and employment bureaus conducted by educational or municipal authorities can go hand in hand with the school system that creates an efficient producer, thus further tending to free cities from the heavy costs of casual and non-employment. Boston has organized a vocational bureau for the purpose of "collecting and recording information as to the occupations of the community, educating parents and children in the advantage of special training for any occupation, counseling children and parents on their specific problems, and connecting the children with actual opportunities for employ-

ment.”¹ City employment bureaus, developed to a degree of special efficiency in German cities, would supplement the work of the school systems and make available to our industries and preserve to society a vast total of human resources.

THE REORGANIZATION OF SECONDARY SCHOOLS

It is axiomatic that those communities reap most bountifully from their school expenditures whose schools are best adapted in their curricula and activities to the community's needs. The weakness of our secondary schools, long felt by educators and students of our school systems, has been the wide breach between community needs and secondary school courses. But 2 per cent. of the graduates of secondary schools go on to college; yet 98 per cent. of our secondary schools form their courses of study for those 2 per cent.

High-school courses have been shaped by the colleges and universities to suit their own supposed or actual needs. Social efficiency and ample return on the moneys invested demand that the curricula of secondary schools be first made for the 98 per cent. of their students and that the colleges and universities then adapt themselves to these courses.

A reorganization of secondary schools that will make them more useful while preserving their cultural value will do much to entice a larger percentage of pupils to continue therein. In the elementary public schools of New York City there are approximately 661,000 students, reported Mayor Mitchel recently. “Out of this great number but 41,000 qualified for, and approximately but 23,000 actually entered, the high schools. And in the

¹ Beard: American City Government, p. 322.

fourth year, the year of graduation from the high school, but 4,079 survived." Such is typical of the mortality in other cities. If education is to continue up to the age of eighteen, as it must if it is to create an efficient producer, a reorganization of secondary schools is clearly necessitated.

This reorganization is not synonymous with the remaking of our high schools into trade schools. It need not necessarily mean that the time given to dead languages be materially reduced. There can and must be, however, a vitalization of the curriculum and a socialization of the instruction both in method and in content.

No theories need be advanced as to what shape this reorganization should take. The shape that it will take is clearly indicated in the preliminary statements made by the Chairman of the Commission of the National Education Association on the Reorganization of Secondary Education. This commission appointed twelve committees on English, Social Studies, Natural Sciences, Ancient Languages, Modern Languages, Household Arts, Manual Arts, Music, Business, Agriculture, and on the Articulation of High School and College. These twelve committees have separately had their meetings and through a chairman have summarized the plans of their several committees and the results to be secured. A résumé of these will indicate the tendencies in the reorganization of secondary education. The Committee on English states its aims as follows: "Broadly speaking, it should be the purpose of every English teacher, first, to quicken the spirit and kindle the mind and imagination of his pupils, and to develop habits of weighing and judging human conduct with the hope of leading them to higher living; second, to supply the pupils with an effective tool for use in their future private and public life—i. e., the best command of language which,

under the circumstances, can be given them." The statement by the Chairman of the Committee on Social Studies has already been given. The chairman of the Committee on Natural Sciences states: "It is of the utmost importance that the pupil should gain power to apply the facts and principles of science and to interpret natural phenomena. For this reason the teacher of science should draw largely from material found in the environment and should by no means confine attention to the statements in the textbook or to the laboratory exercises." The statement of the Chairman of the Committee on Ancient Languages includes the following: "We have just asked ourselves what are the aims of Latin teaching? The following are some of the aims which seem worth while: To enrich the English vocabulary, both by the addition of new words and particularly by a more perfect mastery and clear understanding of many of the words already in use; to develop an appreciation of word, phrase, and clause relations; to teach clearness and accuracy of expression, both oral and written; to develop habits of industry and application; to make the pupil an intelligent critic of his own oral and written speech and that of others; to lay a good foundation for the study of English and of other modern languages; to read some of the great Latin masterpieces; 'to give a wider view of life through familiarity with a great civilization remote from the present, both in place and time, in the cool, calm air of non-contemporaneous events.'"

The three aims of modern language instruction, says the Chairman of the Committee on Modern Languages, are: (1) "To secure a reasonable degree of phonetic accuracy and lead the pupil to feel its importance." (2) "To teach precision in the use of words and to give a clear understanding of grammatical relations and of the

common terms which state them, showing why such terms are necessary." (3) "To stimulate the pupil's interest in the foreign nation, leading him to perceive that the strange sounds are but new ways of communicating thoughts quite like his own; showing him by the close resemblances in words and viewpoints that the German and the Frenchman are his kinsmen, with interests, ambitions, and hopes like his own; revealing to him that their tales can give him pleasure, their wisdom can enlighten him."

"It is the purpose of the group of courses offered under Household Arts," says the Chairman of the Committee on Household Arts, "to prepare girls not only to become better homemakers, but to make them more intelligent concerning those occupations which were formerly a part of every home but have recently been taken from the home, and to give them an appreciation of the factors that make up the municipal environment, and of the influence of these on the home."

The statement of the Chairman of the Committee on Manual Arts is as follows: The Committee believes "that all high-school subjects should be given with a much clearer conception of the provisional destination of the pupil, or at least with a fuller knowledge of his educational program, with a consequent increase in definiteness of purpose. . . . If regard is to be had to the 'destination' of the pupil, numerous questions at once arise as to the possibility of adjusting school work to what is to be encountered at the end of the course. In the past the chief questions of articulation have been those which concerned jointly the high school and the college, but to-day direct articulation is made also with vocational life. Thus vocational guidance and training are coming to be of prime importance to the great majority of high-school pupils, and consequently factors to be

taken into account in any solution of the problems before the committee."

"The qualities of thought and feeling," says the Chairman of the Committee on Music, "out of which good music springs are highly desirable. They reflect a desire for beauty; they reveal the spirit of man in its more profound and universal relations and impulses."

The aim of the commercial course, the Chairman of the Committee on Business states to be: (1) "To provide the student with the proper physical equipment, through instruction in physiology, hygiene, and by physical training." (2) "To provide instruction in citizenship, through courses in civics and through social organization of the school." (3) "To lay the foundation for a broad appreciation of life, through courses in science, literature, art, music, etc. The special aim of the commercial course is to enable the student to fill a place in commercial life. The course should be so planned as to equip the student to earn his livelihood immediately, in case he leaves before completion of the course, and also to equip him to fill more responsible positions as they may offer in the future."

DEMOCRATIZATION OF HIGHER EDUCATION

If higher education is worth the millions of dollars it costs, it must have a community value. Community returns for community expenditures in higher educational institutions come through the democratization of knowledge and through the democratization of the services of the members of their faculties. This applies with equal forcefulness to endowed as to public institutions. "Universities," said Hon. James Bryce, in an address delivered before the University of California,

"are lamps which cast forth their light on everything around them. Not only ought they to distribute information on scientific phenomena and processes applicable to agriculture and other industries, as some state universities have done with eminent success, they ought also to place their knowledge of economic history and of the economic conditions of other countries, and of the experiments, whether made in those countries by legislative or by voluntary action, at the disposal of the administrative officials and the legislature of their state. When any investigation is needed, either of a scientific or historical or economic kind, they can furnish from among their teaching staff trained investigators whose wide range of knowledge and mastery of method will make them valuable colleagues of the practical men who also may be charged with the conduct of such inquiries."

The democratization of higher educational institutions means (1) departments of correspondence; (2) departments of instruction by lectures; (3) readjustment in courses of instruction; (4) public service bureaus with such divisions as legislative reference, municipal reference, sanitary engineering, social sciences, and general information and welfare; (5) the recognition of the principle that the faculties of higher educational institutions, within their respective specialties, are expected to render service to public officials, civic bodies, and to their communities within reasonable limits of their time and energies.

The correspondence departments, started in the eastern states, have reached their fullest development in the Department of Correspondence Study conducted by the University of Wisconsin. This department offers courses in agriculture, business and industry, engineering (electrical, mechanical, civil), mechanical drawing, surveying,

highway construction, the modern languages, history, political economy, political science, sociology, philosophy, education, mathematics, English language and literature, physical sciences (bacteriology, botany, physiology, geography, geology, chemistry, astronomy), law, pharmacy, music, home economics and teachers' reviews.

The department of instruction by lectures to be effective must include more than polite lectures given in semi-formal fashion in or about the university or college grounds. It must mean the carrying of instruction in definite fields out to the people in their own communities. The work of the agricultural schools in their special lecture trains is quite to the point as illustrating what can be done in the democratization of the results obtained by special students and experts. Of similar significance is the education of small shopkeepers as undertaken during Retail Merchants' Week, conducted jointly by the Wharton School of the University of Pennsylvania and the Department of Public Works of the City of Philadelphia. In this short course the problems of the retail merchants in buying and selling and in conducting their business were discussed by experts. The public evening lectures in New York City, a plan that has been adopted in some form or other in Los Angeles, San Francisco, New Orleans, Worcester, St. Louis, Columbus, Memphis, and other representative cities, are also proving of significant social and educational value. The speakers here—not all, but a large percentage of them—are university and college men. In 1910 more than one hundred courses were given and there was an aggregate attendance of nearly 1,000,000.

The readjustment in the curricula of higher educational institutions does not mean that there should be no "required" courses. It does mean, however, that all of the students shall be brought into close touch with the

social sciences; and that history, chemistry, physics, and the other sciences, shall be so taught as to be related to vital problems in the social and industrial world.

A poignant method of democratizing the knowledge of the higher educational institutions is through bureaus of public service. These bureaus have been organized in a number of universities, such as the universities of Oregon, Texas, Washington, California, Wisconsin, Cincinnati, Harvard, Kansas, and Iowa. These bureaus utilize the libraries, laboratories and the knowledge of the experts of their respective institutions.

To be the most effective teachers, certainly the major portion of the faculties of higher institutions must be specialists. To be effective specialists, however, either in the pure sciences or in the social sciences, their work must be related to the problems of their time. This is assured and a maximum of personal usefulness is attained when such faculty members are subject to expert service for their communities. More than this, that specialist is the most effective teacher who is daily in contact with the problems with which many, if not all, of his students will later directly or indirectly be thrown into contact. There is still a place, to be sure, for the closet thinker, but for specialists who are also teachers, maximum usefulness to their students, to their communities and to the institutions they serve comes only when their work is shot through and through with the spirit and practice of public service. This need has been reflected by the report issued by the Committee on Practical Training for Public Service to the American Political Science Association at its Washington meeting, January 1, 1914, and by the National Conference on University and Public Service held in New York City in May, 1914, and through the movement on foot among graduate faculties of universities and colleges to

place graduate students in practical work and in touch with administrative bureaus, whether governmental, industrial or civic.

Through such practical democratization of service and expert knowledge do our higher educational institutions amply reward their communities for the heavy financial levies necessary to support them. Through the democratization of higher educational institutions, there is thus effectiveness in service and efficiency in the educational training of students.

EFFICIENT UTILIZATION OF THE SCHOOL PLANT

There remains the efficient utilization of the school and college buildings and grounds. Built at community expense, they should be used up to 100 per cent. of their availability for recreational, educational and civic activities. Without such use, the public school plant functions only in part and that in a parental way. With this extended service it functions fraternally as well. And this extension of usefulness means more than a saving in funds to those who must otherwise hire halls and grounds; it means more than opportunity for civic, social and recreational activities under wholesome surroundings. It means the upbuilding of a community fraternal spirit; it means broadening the foundations of a democracy. School buildings should be so planned as to provide adequately for neighborhood activities. The use of expensive school buildings for only six hours a day for only 200 days a year is uneconomical, to say the least.

And, finally, the efficient utilization of our school plants, facilities and faculties requires a coöperative spirit among all the social and industrial institutions of the

community. If the schools are to give in more directions, they must also receive in more directions. The duty to give and to receive from more directions applies equally to the church, the library, the club, the museum, the public official, the business organization, the business man and the private individual. Mutual coöperation will make for economy and usefulness. With such coöperation the school and the school plant will return to the community full value and more than full value for all they cost.

CHAPTER XVIII

LOWER UTILITY COSTS

Approximately eleven billion dollars in capital are invested in municipal utilities. Upon this vast sum the people of the United States, and primarily the urban dwellers, are expected to pay adequate returns.

Of this eleven billion dollars, over eight billions are invested in electric, gas, street and interurban railway companies,¹ of which sum two billions (\$2,052,494,697)² are in electric light and power companies, over one and one-third billions in artificial gas companies³ and approximately five billions⁴ in street and interurban railway companies. Another billion and a quarter of dollars are

¹ From a brief submitted on behalf of public utility holding companies to the Interstate Commerce Committee of the United States Senate, in the matter of Senate bill No. 4150, by William P. Bonbright & Co. and other firms interested in holding companies.

² This was the amount in 1912, according to the report of the National Census Bureau on "Central Electric Light and Power Stations," Bulletin 124. Commercial companies only are included.

³ The Report of the Bureau of Census for 1910 on "Statistics for the Manufacture of Gas" gave the capitalization of the artificial gas companies reporting to the Census Bureau as \$915,536,762 in 1909.

⁴ \$4,708,568,141, according to the report of the National Census Bureau in Bulletin 124, 1912, p. 66, on "Street and Electric Railways." There are, no doubt, certain small companies that did not report to the Bureau.

invested in telephones.¹ Cities of the United States of over 30,000 in population, alone, own over one and one-quarter billion dollars of lands, buildings and equipment used in public service enterprises.² The total was \$1,326,158,240, of which \$909,591,279 was for water supply systems, and \$416,566,961 for "other public service enterprises." What these "other public service enterprises" include may be inferred from the items enumerated in the census report for 1910. According to this report of the \$1,144,007,040 invested in public service enterprises in these cities, \$783,126,016 went for water supply systems. The items were:

Water supply systems.....	\$783,126,016
Electric light and power and gas supply systems.....	20,125,105
Markets and public scales.....	25,100,341
Docks, wharves and landings.....	123,826,580
Cemeteries and crematories.....	13,913,419
All other.....	177,915,579

To be added to the \$20,125,105 for electric and gas systems was another item of \$9,797,643 listed under municipal service enterprises. Cities with a population of from 8,000 to 25,000 owned, over a decade ago (1903), approximately \$75,000,000 in water works (\$67,446,783)

¹ Prof. E. W. Bemis reported the maintenance, reconstruction and plant investment of all the Bell Telephone companies alone in the United States to be, in 1911, \$666,660,702. (See Report on the Investigation of the Chicago Telephone Company, submitted to the Committee on Gas, Oil and Electric Light of the City Council of Chicago, p. 54.) The property value reported in the World Almanac for Bell telephones in 1914 was \$850,831,158, while the property value for the 15,000 independent companies reported therein, operating over 4,000,000 telephones, was approximately \$400,000,000.

² According to the Census Bulletin on Financial Statistics for Cities of over 30,000, p. 62 (1912).

and electric light plants (\$5,439,747).¹ Since this report appeared, these cities have added quite extensively to their municipally owned and operated public services, so that, including other small cities, it is safe to say that cities under 30,000 have invested in municipally owned and operated public utilities approximately one hundred and fifty million dollars.

Here is a known total of over \$10,650,000,000. In addition to these utilities, vast sums are invested in private water plants, in natural gas plants and in steam heating plants. Moreover, unquestionably numerous stations and plants, both private and public, have not reported in any of the available sources. The eleven billion dollars as an approximate estimate of the capital invested in municipal utilities upon which urban dwellers primarily must pay an adequate return is, therefore, a conservative estimate.

Even more significant than the vast amount of capital invested in public utilities is the rapid increase in the total capitalization of such concerns. The capitalization of electric companies alone increased 103 per cent. from 1902 (\$2,308,282,099) to 1912 (\$4,708,568,141). According to charts submitted to investors by Henry L. Doherty & Company, of New York City,² the securities of gas and electric companies outstanding increased 110 per cent. from 1902-1911, as compared with an increase of slightly over 50 per cent. for steam railroads and around 15 per cent. for industrials. Of equal significance is a similar chart, published by this company, showing that the net earnings of gas and electric companies increased 100 per cent. from 1902-1911, with a steady increase, while the net earnings of railroads spasmodically increased up to 40 per cent., rising slightly

¹ Census Report for 1903, p. 196.

² Copyrighted, and noted here with special permission.

above that in 1910, whereas the net earnings for industrials showed rapid fluctuations above and below the net earnings for 1902.

Vast, indeed, are the sums paid by consumers in supporting this tremendous capitalization. The total income for light, heat and power to both commercial and municipal central electric stations was \$302,115,599 in 1912, an increase of 252.5 per cent. over the total income for 1902.¹ Of this sum 3,837,518 consumers paid \$221,200,466 for commercial light, power and heat; \$27,273,226 went for municipal street lighting, and \$2,504,511 to the lighting of municipal buildings.²

In 1912 3,311,870 customers of commercial central electric stations paid \$205,973,946 for their light, heat and power, and 525,648 consumers of municipal plants paid \$15,226,520 for their light, heat and power. Considerably over 75,000,000 lamps are wired for service by municipal central and commercial central electric stations.³ Slightly over twelve billion (12,135,341,716) passengers paid over half a billion dollars (\$520,184,773) to street railway companies in that same year.⁴ On the

¹ Total income for 1902, 1907, 1912, p. 14, Table 1, Bulletin 124, Department of Commerce, Bureau of the Census: 1902, \$85,700,605; 1907, \$175,642,338; 1912, \$302,115,599.

² Current sold to other public utilities, \$31,019,660, while the estimated value of free service to commercial stations was \$513,644; to municipal stations, \$4,469,351.

³ Estimated number of lamps wired for service in 1912: Commercial central: arc, 413,544; incandescent, 69,428,356. Municipal central: arc, 91,851; incandescent, 7,057,849.—Census Bulletin 124, p. 14.

STREET RAILWAYS

PASSENGERS CARRIED

	1912	1907	1902
Revenue.....	12,135,341,716	9,533,080,766	5,836,615,296
Transfer.....	9,545,554,667	7,441,114,508	4,774,211,904
Free.....	2,423,918,024	1,995,658,101	1,062,403,392
	165,869,025	96,308,157	Not available

basis of a per capita expenditure of \$5 for every dollar of new annual revenue for a utility (this ratio applies especially to electric utilities) consumers are paying over two billion dollars annually for their municipal utilities.

That the problem of utility costs is not only a pressing but an increasingly important one is clearly revealed by the figures showing the phenomenal increase in the amounts paid in the last decade for certain utilities. The amount paid to electric companies for light, heat and power increased from \$85,700,000 in 1902 to over \$302,000,000 in 1912. That this increase is not peculiar to electrical companies but may be expected for years to come in other utilities as well is indicated by a statement in the brief submitted on behalf of holding companies¹ which states that: "New capital at the rate of approximately \$400,000,000 per year—\$8,000,000 per week—will be required" in electric, gas and street railway companies "for several years to come if the present rate of progress is to be maintained." The amount paid in street railway fares increased during this same decade from \$236,000,000 to \$520,000,000.

What lowered costs mean is shown by the fact that even a 5 per cent. decrease in existing electric rates would mean a saving to American citizens of over \$15,000,000

STREET RAILWAYS (*Continued*)

MILES OF TRACK OPERATED		
1912	1907	1902
41,064.82	34,381.51	22,572.52
TRANSPORTATION REVENUES		
1912	1907	1902
\$520,184,773	\$390,276,347	\$235,997,005
NON-TRANSPORTATION REVENUES		
1912	1907	1902
47,326,931	27,911,511	11,556,994

Bulletin 124, Department of Commerce, Bureau of the Census, 1912 pp. 66 and 86.

¹ Brief submitted on behalf of Public Utility Holding Companies to the Interstate Commerce Committee of the United States Senate in the matter of Senate Bill 4160.

annually. The estimated annual savings to car riders in the city of Cleveland by the reduction of street fares of one cent for transfers, with a periodic charge, as has been required by ordinance to keep a reserve fund up to a certain point, is \$4,000,000 annually, an income, at 5 per cent., on over \$80,000,000.

The interests of the urban dweller in cost and service standards of the city's utilities do not end with the sums he must pay for such services. Upon the adequacy and purity of the water supply depend his home comforts and his health. Fuel expenses and conveniences, and the sufficiency and satisfaction in the lighting of his home depend upon the quality and uniformity in pressure of the gas furnished by the gas company. On the continuity of service and the standard of fixtures furnished by the electric light company depend home conveniences, working facilities and safety from fire. For business efficiency and home comforts the urban dweller must rely upon the adequacy of the service furnished by the telephone company. The facilities for reaching employment, the location of the home, the time spent in transit and in overcrowded cars all depend upon the service standards and the efficiency of the street railway company. The municipal utilities create, over the entire city, a network of wires and pipes that levy a tribute not only upon the pocketbook but upon the convenience and happiness of the city dweller, and make a city either unsightly or beautiful, and streets passable or unsafe, as the managers of the utility companies may decree.

Upon the public utilities depend land values; and the extension of those utilities indicate in what sections of the city growth can be expected. More than this, the very efficiency of city government, the type of man in the city legislature and in the city's executive office, hinge all too often upon the wishes of the public utility com-

panies, whose first aim is to protect their franchises and franchise values. Weary pages of the history of practically every American city recount the debauchment of city officials for sordid utility purposes. The city's utilities are indeed the city's second nature and heavy is the tribute they levy upon every home.

This one principle should stand out clearly: *The urban resident must have these utilities furnished under adequate service standards at prices that provide a reasonable return upon the actual costs of furnishing those services.*

As self-evident and as important as this principle is, it is crystal clear to all familiar with utility prices and standards that few indeed are the American cities where it is put into practice.

Before entering into a discussion as to the public policies essential to attaining this standard for municipal utilities, it is necessary to consider some of the actual conditions as to those utilities which now prevail. The big policy-determining factors in an adequate and constructive program for municipal utilities are:

(1) *The capitalization of municipal utilities is still based largely on "future values" or "future earning power" and not on actual investment or replacement values;*

(2) *The major portion of municipal utilities is owned and operated by huge holding companies;*

(3) *American cities do not have the powers essential to complete control over their own utilities;*

(4) *Each city or community is becoming more and more dependent upon the efficiency of the utilities furnished for or running through other cities and communities.*

The attitude of the owner of utility properties is still shot through and through with the conception that those

properties are in the same category as private business and hence their capitalization may be based on future values or future earning power. This point of view was clearly put very recently by President Mellen of the New York, New Haven and Hartford Railroad in his testimony before the Interstate Commerce Commission when he replied to the question: "So you paid \$19,000,000 or \$20,000,000 for property (trolley lines) worth about \$8,000,000?" by saying: "I do not accept your valuation of \$8,000,000. The sum we paid was the value of the trolleys." "How do you estimate the value in a case like that?" "When I value a purchase, I consider its *prospective value*; what it will *ultimately* be worth."

Illustrations as to overcapitalization and the watering of utility stock are familiar to every reader. If illustrations be needed to show the extent of overcapitalization and watering of stock, the following comparisons of the fair value fixed by certain public service commissions with the par value of the stocks and bonds issued by certain companies, and with the values claimed by those companies on which they should be allowed to earn a fair return, will be ample. The Public Service Commission of the Second District, New York, in 1913, fixed the fair value of the Buffalo General Electric Company at \$3,194,159. The par value of the stocks and bonds that had been issued by this company and upon which they expected to levy tribute and to pay returns was \$6,912,000 or 116 per cent. more than the fair value fixed by the Commission. The company claimed a value of \$6,166,140, or 93 per cent. more than the fair value fixed by the Commission. This same Commission found the fair value of the Cataract Power and Circuit Company to be \$2,287,582. The company had issued stocks and bonds (\$3,384,000) 47 per cent. greater, and claimed a value (\$5,988,913) of 161 per cent. more than this amount.

The Union Electric Light and Power Company claimed a value of \$24,072,502, which was 41 per cent. greater than the value fixed by the Public Service Commission of St. Louis (\$17,015,466). The company had issued stocks and bonds to the amount of \$26,956,000, 58 per cent. greater than the value fixed by the Commission. The Wisconsin Railroad Commission fixed a value of \$1,646,893 for the Superior Water, Light and Power Company. The company had claimed a value of \$1,991,027, 21 per cent. in excess of the value fixed by the Commission, and had issued stocks and bonds to the amount of \$2,800,000, 70 per cent. in excess of the Commission's estimate. The Public Service Commission of the First District, New York, fixed the fair value of the Queens Borough Gas and Electric Company at \$1,660,000. The company had claimed no value but had agreed to accept the Commission's book value, \$3,559,802, which was 114 per cent. higher than the value fixed by the Commission. The company had issued stocks and bonds to the amount of \$3,600,000—116 per cent. in excess of the Commission's valuation.

Capitalizing utilities on future values means, in effect, that the city dweller is to pay returns, not only on actual values, but also on such imaginary values as silver-tongued stock promoters and investment bankers can create.

The magnitude of the interests involved and the large amount of capital invested in holding companies have been set forth accurately, it may be assumed, in the brief submitted on behalf of Public Utility Holding Companies to the Interstate Commerce Committee of the United States Senate. This brief shows that, of the \$8,000,000,000 or more "of capital employed in electric, gas, street and interurban railway companies," nearly five and a half billion dollars are controlled by holding

companies and their subsidiary companies. "Of the approximately eighty-nine millions of people served by Electric Light and Power and Gas Companies over sixty-two millions (approximately 70 per cent.) are served by holding company systems." Holding companies control 76 per cent. of the two billion dollars of capital invested in electric light and power companies; two-thirds of the one and one-third billion dollars in artificial gas companies and two-thirds of the five billion dollars of capital in street and interurban railway companies. "In the twenty-eight cities of the United States having a population in excess of 200,000, the street railway mileage controlled by holding companies is in excess of 61 per cent."¹ Of the 72.6 per cent. increase in the total income of commercial electric stations in the five-year period from 1907-1912, 73.9 per cent. was in incorporated stations, while but 24.3 per cent. and 7.7 per cent. respectively were in stations owned and operated by individuals and firms. More specific examples of the extent and influence of holding companies are the Middle West Utilities Company which operates in 315 cities in

¹"Evidences that the holding company in the public utility field is gaining in favor, with both the financier and the investor, is indicated by current statistics. The best figures available show that of approximately \$2,111,961,000 of securities issued by electric light and power companies, there is about 82.5 per cent. controlled by holding companies. Of about \$1,320,000,000 of securities issued by artificial gas companies, there is about 66 per cent. controlled through holding companies. Of about \$4,043,663,000 of securities issued by traction companies there is 81.4 per cent. controlled by holding companies. This would indicate that out of a total of \$7,500,000,000 of securities, which are now outstanding by these three classes of utilities, 75.5 per cent. are controlled by holding corporations. This does not include the securities of natural gas companies and water-supply companies." (*The Gas Age*, Vol. XXXIV, No. 5, p. 214, September 1, 1914.)

twelve states¹ and the United Gas Improvement Company which operates in sixteen states. William P. Bonbright & Co., investment bankers of New York City, are interested in public utilities in thirty-four states.²

Roughly speaking, the history of utility companies may be divided into three eras: (1) That of the small investor who developed a local street-car system or other utility for a limited field only, with the expectation of owning and operating it himself. (2) Then came the heyday of utility pirates who through means fair and foul squeezed out the small investor, through control of the city government obtained exclusive franchises leading to monopolistic control, and then, through exclusive franchises or other agreements that could be interpreted as contracts, the obligations of which the state could not impair within the meaning of the federal constitution, assured to themselves a field pledged neither to competition nor to reasonable regulation and control by the city's authorities. (3) We are entering, it is hoped, into the third era where, through administrative regulation and other means, utility rates and service are based on the actual cost of furnishing those services. For there are many among the large holding companies and investment bankers who see clearly that safety of their securities from virtual destruction through public ownership

¹ Illinois, Indiana, Kentucky, Oklahoma, Missouri, Michigan, New York, Vermont, New Hampshire, Maine, Wisconsin and Nebraska. Brief submitted on behalf of "Public Utility Holding Companies" to the Interstate Commerce Committee of the United States Senate, in the matter of Senate Bill No. 4160, p. 20.

² Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Michigan, Minnesota, Missouri, Montana, New Hampshire, New York, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, and Wisconsin. *Ibid.*, p. 21.

depends upon basing prices and service standards on actual costs and not on capitalizations representing little more than the selling power of utility promoters.

Those interested in holding companies present an opposing array of advantages accruing to cities and consumers as a result of their operations. Among these advantages are: (1) that a high-grade supervising staff can insure "efficiency in construction, administration, maintenance and operation" of the local utilities of a standard impossible save through the holding companies; (2) centralization in purchase and standardization of materials and supplies result in definite economies to be shared ultimately by the consumer; (3) standardizing of operating and accounting methods makes possible comparisons in efficiency and in rates and prices so that the results obtained by local operators may be measured and the communities may likewise measure the justice of their own rates and service standards; (4) outgrown equipment can be transferred to smaller communities and thus save heavy outlays for installation and depreciation; (5) securities of large holding companies are more salable and funds needed for local development can be more advantageously secured; (6) as the combined credit of a number of plants can be pledged and risks prorated and averaged, investments are more stable.

Those who see in holding companies dangers to the public welfare greater than their advantages point out that, while there may be a capable, general supervising staff, this central staff has been too often handicapped by substituting low-grade employees in the local concerns, and that the economies professed in the purchasing of supplies and materials, through the standardization of operating and accounting methods, through transfer of equipments or through stability in investments, are translated into "watered stock" and do not

go to the consumer. To this watered stock, it has been further pointed out, are added "future values" due to the growth of cities and the unearned increment resulting therefrom; and even the reputed advantages of the large concern are exploited as a basis for still further inflation of capitalization, all of which must ultimately be borne by the consumer. The pressure on the local manager to pay good dividends and ample returns on bonds and stocks forces him to pay first consideration to maximum returns and to regard service and rates as incidental and secondary to this. Moreover, the opponents to holding companies further allege that prices to patrons served by holding companies are not lower, but in many cases higher, and service is no better, and in many places not so good, as that enjoyed by patrons of plants not owned by holding companies. Moreover, evidence is arrayed to show that "the value of the service" is used as the basis for prices instead of "the cost of service."¹

A real danger flowing from holding companies is that such companies, owning and operating types of plants that might otherwise compete with each other, naturally tend, as it is to their own advantage to do, to prevent any actual competition among their own concerns. Thus a holding company that owns and operates a gas plant in one city will naturally look with disfavor upon the lowering of rates by another of its own plants in another city. Indeed, in English cities, where gas and electric plants are, as a rule, municipally owned and operated, it is held to be far more advantageous to have their control vested in two different committees of the Council

¹A committee of the National Electric Light Association at the annual convention of that association held in Philadelphia in 1914 reported that rates should be based on the value of the service to the consumer, which, as was pointed out at the time of the convention, is but another way of saying that the basis of rates should be "what the traffic will bear."

because centralization under one committee would eliminate the very evident advantages accruing through competition between the two in rates and in service. Here is, without doubt, a very grave danger to the welfare of cities and urban residents.

And, finally, it is urged that holding companies add to the difficulties of local control and, through making it difficult to secure reasonable rates and fair service, tend to perpetuate inflated capitalizations. It is admitted that, under absentee ownership, local pressure by self-seeking stock and bond holders, who usually come from the class who occupy prominent positions in the commercial organizations and who have more or less control over newspapers and other means of publicity, and who have a "sphere of influence" in governmental circles, has, to a large extent, been eliminated. But, in lieu of this, it is more difficult to get experts, such as engineers and lawyers, to work for and testify in behalf of the public side, and the funds and experts available to the corporations can be used effectively to overcome any opposition that can be set up within the funds available to local users or local public officials. To overcome this difficulty, the cities have begun to unite in the organization of a Utilities Bureau through which cities can coöperate and exchange information as effectively as do the utility corporations through holding companies and other large national organizations.

The conclusion to be reached is that the cities must obtain and maintain virile control over their own public utilities to the end that rates and service may be based on the actual values of local plants and that any values accruing simply through large monopolistic ownership may be wholly eliminated.

The interdependence of one city or county upon other cities and counties is apparent to all and is rapidly be-

coming a factor of increasing importance. A case in point is the rapid development of interurban railway lines. Since 1902 there has been an extensive development of suburban and interurban railways. By 1907 the track mileage outside of city limits constituted nearly two-fifths of the total track mileage in the country.¹ Again, the economy that comes through large reservoirs and water systems out of which many cities can be supplied, the dependence of the health of the citizens of one community upon the purity of the water supply of near-by communities, the economies resulting in large scale generation of electric current, all further the dependence of one community upon another. No city can live unto itself and utility rates and service are of interest to consumers throughout the entire state.

The inadequate power of American cities in the control and operation of their own utilities has so long been a matter of comment by those familiar with the situation that only passing reference need be made to it here. The regrettable fact is that conscious efforts are still being made to keep the cities impotent in handling their utility problems through denying them powers justly theirs. Thus the Pennsylvania public service company law, passed in 1913, contains provisions that all contracts between public service companies and cities must be approved by the Commission: "No contract or agreement between any public service company and any municipal corporation shall be valid unless approved by the commission: Provided, That, upon notice to the local authorities concerned, any *public service company* may apply to the commission, before the consent of the local authorities has been obtained, for a declaration by the

¹General Electric Light and Power Stations and Street and Electric Railways, 1912. Department of Commerce, Bureau of the Census, Bulletin 124.

commission of the terms and conditions upon which it will grant its approval of such contract or agreement, if at all.”¹ The result is that the city is placed in the unenviable position of having to appear before the Commission to ask it to lower rates or improve service as provided by a contract to which it has already been voluntarily a party. The provisions of other public service laws likewise tend to act as an effective estoppel upon anything like a virile and reasonable action on the part of the city.

ELEMENTS IN A CONSTRUCTIVE UTILITY PROGRAM

If rates are to be based on actual costs, and not on inflated capitalization, and if services are to be such as are reasonable, adequate and necessary for the furthering of the best interests of the urban dweller, the following principles must be fundamentally followed in the policy that the city adopts in its relation to its serving companies.

1. *Utility rates and service must be based on the actual cost necessary for providing and furnishing those services.*

This is axiomatic. It is a generalization to which all assent—in form. The difficulty comes, however, in determining the basis for judging what the actual costs are. “A reasonable return on a fair valuation,” say the courts. But what is a reasonable return? And what a fair valuation? The courts have upheld a return of from 5 to 8 per cent. as adequate, the percentage varying with the plant conditions, elements of risk and the neces-

¹The Public Service Company Law establishing THE PUBLIC SERVICE COMMISSION of the Commonwealth of Pennsylvania, January 1, 1914.

sity for further investments to secure adequacy and safety of service.

But what shall be included in a reasonable return? Shall all past losses be allowed for? Shall the company be allowed to recoup from future returns all money spent in developing the business with or without regard to how those moneys were spent? "Experts" are appearing before the public service commissions offering "scientific theories" of return which, if accepted, would authorize the utility concerns in effect to "charge all the traffic will bear."

The issue at stake is well expressed in the two phrases "competitive theory" and "agency theory." The former holds that, in the past, utilities were, in fact, whatever the theory, on the same basis as private companies, and that the return allowed, therefore, to be reasonable, must include all of their past losses and developmental costs. The agency theory is in substance to the effect that utilities are now, in fact, whatever they once were, agents of the state or of the city, and that the return and rate of return, to be reasonable must, therefore, include only enough to pay a fair return on a fair valuation of the property now being used and now useful for the public purpose. This latter basis is the one upon which rates for municipal utilities must ultimately be based.

But what elements shall be determining in arriving at a "fair valuation"? These have been set forth in the leading case of the United States Supreme Court, *Smythe versus Ames*, 169 U. S. 466, decided in 1898, which reads as follows:

"We hold, however, that the basis of all calculations as to the reasonableness of rates to be charged by a corporation maintaining a highway under legislative sanction must be the fair value of the property being used

by it for the convenience of the public. And in order to ascertain that value, the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute, and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case. We do not say that there may not be other matters to be regarded in estimating the value of the property."

The present market value of the stocks and bonds cannot of themselves be used as the sole basis for determining a fair valuation, as that market value is based as well upon the estimated future earnings as upon current earnings; and it certainly is based on *existing* rates and service standards. To admit market value as a determining factor in fixing rates would of itself, therefore, preclude any lowering of rates. Assessed valuation for taxation purposes is not alone a satisfactory guide, since the assessment for taxation varies with the rates and with the inclinations of tax assessors. Neither can the original cost of the property alone be taken as a final measure for fair value, because the properties may have cost too much, or because the plant as purchased is too large, or because a portion of the plant is not now utilized, or because the equipment has been superseded. The bare cost of substantial reproduction at the present moment is of value in determining a fair valuation; but alone it cannot be the guiding factor because it bears no necessary relation to actual values. "Other factors, such as depreciation through wear and tear in service, the failure of the management to keep its property abreast of the march of invention and progress, the extent to

which the facilities of the plant are capable of supplying the needs of a growing and shifting population," are also elements of present value.

"The company is entitled," says the Wisconsin Commission, "to a fair return, not always upon the cost of the property, because it may have cost too much; not always upon the outstanding indebtedness, because it may be in excess of the real value of the property; not always upon the total amount invested, because some portion of that which is acquired by the investment may be neither necessary nor presently useful for the public service; but upon the fair present value of that which is used for the public benefit, having due regard always to the reasonable value of the service rendered." ¹

2. *The city may well assume all risks as to future investments in its utilities.*

An ever-present factor in the misgovernment of American cities has been speculation in their public utilities. Of the many objections to such speculation, these stand out ominously: (a) The element of speculation often attracts a type of owners whose venality is but mildly expressed by the epithets so often applied to them of "grafters" and "utility pirates." (b) So long as there is an element of risk, the utility owner can by right expect and demand a return that will amply compensate him for such risks. Since the consumer has to pay, therefore, not only for actual losses, but for imaginary risks, his costs can be lowered, and a higher type of utility owner secured, by the city's frankly assuming such risks. The ways in which this can be done are numerous. New York, Philadelphia and Boston have recently assumed the risks incident to the building and operation of their subways. In assuming such risks,

¹ See Clyde Lyndon King: "Regulation of Municipal Utilities," p. 304.

however, the city must take care not to guarantee existing capitalizations, if they are "inflated," nor assume the costs of past follies.

3. *Utility rates must be adjusted in accordance with the quality of the service rendered.*

Quality of service as here used includes extensions, additions, modern equipment, safety appliances, character of pressure, the laying of pipes, the putting of wires underground and any and all other phases of service to the end that standards shall be adequate and safe. The rate of return and the amount of capitalization allowed must be sufficiently large so that a fair return may be earned upon all necessary investments. The wisdom of the California ruling on this point cannot be gainsaid.¹

¹The California Commission after its investigation of a wreck upon the electric line of the San Francisco, Napa Valley and Calistoga Railway, said:

"Most of these interurban lines should be protected by block signals, and our engineer has been directed to have a thorough investigation made of all these roads with a view to requiring the installation of block signals at once in the more urgent cases and gradually in all cases. If the installation of the necessary safety devices requires an increase of the rates of these utilities, such increase will be allowed. The traveling public has a right to be protected, and should be willing to pay for such protection. Up to the present time, however, in this state, it cannot be said by any public utility that its failure to install proper safety devices is due to inadequate rates. No suggestion has come from any one of them that this Commission permit an increase in rates for this purpose. The Commission stands ready at all times, however, to permit rates high enough to pay a reasonable return upon the fair value of the property devoted to the public service, good wages to experienced men, and installation of such appliances as may be necessary to promote the safety of the traveling public and employees of the utilities under its jurisdiction." *The Annals of the American Academy of Political and Social Science*, May, 1914, p. 298.

If this principle should be accepted, it follows as a corollary that a company using inadequate or obsolete equipment, as, for instance, a type of street lamp that renders poor service and consumes a larger amount of current than a modern type would, should receive lower rates, not higher rates on the ground that the operating expenses for obsolete equipment are larger. So, a utility with a limited product must be restricted in its operation to the area to which it can render efficient service,¹ such, for instance, as the area to which an irrigation company with a limited supply of water can offer its service, or the area supplied by a natural gas company or an artificial gas company without adequate control over its pressure or quality of gas, and other service connections.²

4. Standards must be set as to renewals and depreciations in utility properties, and the cities themselves must possess full powers to inspect such properties and to take any and all steps needed to see that the required standards are maintained.

It is axiomatic in private businesses efficiently conducted that definite standards of equipment and efficiency must be set and renewal and depreciation funds put aside annually out of earnings to maintain those

¹ Joint use of facilities must be required; such as the use of a city trolley terminal by an interurban line, or better still the running of through freight and passenger cars over both lines.

² Such as between steam railways and electric trolleys. The building of huge steam terminals in the heart of American cities at heavy expenditures for land and buildings could largely be saved by requiring, as German cities do, and Chicago is trying to do, that electric and steam lines should offer joint services. This would ultimately mean a better distribution of patrons with markedly less congestion in foot and vehicle traffic at or near the central sections of the city.

standards. This plain business rule utility corporations have consciously ignored throughout the past. The history of every American city is replete with such instances. There is a special temptation for this to be done, particularly as the end of the franchise term approaches, for either one of three reasons: (1) To withdraw through dividends the money invested if the company may have to cease doing business or (2) to force such franchise terms as the company pleases through promises to improve service standards as soon as those terms have been finally approved by the authorities. If (3) there are provisions in the franchise that look toward municipal ownership and operation, the temptation to let the plant run down is exceedingly strong. As any one or all three of these contingencies may arise at any time in any city, the only safe rule is that definite standards be set by contract agreement or administrative ruling and that the city be given adequate powers to see that these required standards are maintained.

It may be a matter of indifference as to whether the standards are set by state or by city authorities. It is not a matter of indifference, however, as to whether or not the city has powers to inspect the books and properties of the company in order to ascertain whether the company is maintaining its standards as required. It is to their local authorities that the citizens whose money provides and maintains the utilities must look for proper enforcement of maintenance standards. The same rule applies to extensions and additions. Whether there be state regulative commissions or city regulative commissions, or both, the city authorities must retain full powers of inspection. These powers, however, need not be exclusive of the state's powers in the premises.

5. *The public authorities must have complete control*

over future stock issues and the keeping of accounts by the utility company.

Much has been written as to the advisability and inadvisability of public control over stock issues and capitalization. It has been urged on the one hand that the regulative bodies, city or state, can fix rates and valuations regardless of the amount of stocks and bonds issued by the companies. It is further urged that approval of stock and bond issues is a moral, if not a legal, guarantee that the company will be allowed in the future a fair return thereon, whether or not investments have been made with ordinary business judgment or administered with ordinary business efficiency. On the other hand, it is urged that an overcapitalized utility will be under heavy pressure at all times to pay returns on that inflated capitalization and that such returns can be paid only through exorbitant rates or poor service or both. As a rule, regulative commissions will be unable to prevent this. The recent scandal in the New York, New Haven and Hartford Railroad is the typical example now used to clinch this argument.

The gist of the matter seems to be that secrecy or manipulation must forever cease in the field of public utilities and that the only sure way to prevent abuses in the future is to have new stock and bond issues made valid only after approval by the public authorities with full publicity. It would seem that continuity of policy and economic administration of such matters may best be secured through centralization in the state authorities.

The standardization of accounts and the methods of keeping accounts is so evidently coupled with public welfare that few rise to question its advisability now. It is necessary in order to make sure that earnings are properly credited and expenses properly charged. It proves, moreover, to be stimulating to the companies and ad-

vantageous to the communities because comparisons can be made between privately and publicly owned plants.

6. *The city authorities must have in their own right access to the books and the properties of these utilities and any and all other powers needed for a complete determination of the reasonableness of the rates and the adequacy of the services of their utility companies.*

This power is essential to continuous control and continuous control is essential to adequate and safe control of municipal utilities. Whether the commission to hear the case be a municipal or a state commission is not a matter of vital importance. But it is a matter of vital importance that the city's efforts to secure reasonableness of rates and adequacy of service should not be hampered and rendered impotent through inability to get at books and properties. Nothing can be lost in actual values, and much can be gained in public confidence and in city efficiency, through the granting of this power.

7. *As a rule the monopolistic character of municipal utilities must be frankly recognized.*

The monopolistic character of public utilities has been well put by the Railroad Commission of Wisconsin as follows:

"Duplication of such plants is a waste of capital, whenever the service can be adequately furnished by one plant. It necessarily means that interest and maintenance must be earned on a much greater, if not twice as great, an investment and that the actual cost of operation is likely to be relatively higher. Competition in this service, therefore, usually means a bitter struggle and low rates until one of the contestants is forced out of the field, when the rates are raised to the old level, if not above it, or to a combination or understanding of some sort between them which also ultimately results in higher rates. In this way it often happens that the

means which were thought to be preventative of onerous conditions are impotent. In fact, active and continuous competition between the public utility corporations furnishing the same service to the same locality seems out of the question. This has been shown by experience. Such competition is contrary to the very nature of things. Two distinct and separate corporations are not likely to remain separate very long after it becomes clear that the services rendered by both can be more cheaply and more effectively furnished by only one of them." 2 Wis. R. R. Rep. 5.

It does not follow, however, that the best results can be secured through the adoption of a ruling that under *no circumstances* will competition be permitted. Cases will inevitably arise in actual practice where the consumer will get better terms and service in the long run through competition. An electric company highly over-capitalized, with obsolete equipment in its generating plant, with unreasonably high operating costs as a result thereof, and manned by those with an anti-public point of view, will frequently be brought to terms more definitely through a competing company than through any other means. That is to say, a consumer will at times find it profitable to pay for duplication of plants rather than to continue to pay on capitalizations wholly unwarranted and operating costs not justified by ordinary business judgment and efficiency.

Public service commissions have usually followed the Wisconsin ruling, which is to the effect that the public utility company whose territory is threatened shall be given ample time to repent and make the necessary readjustments. In effect this means that all that an offer of lower rates by another public utility company can mean is that the company against which competition is threatened will merely readjust its rates or service standards

to meet the will of the commission. Utility companies, therefore, will have no tendency to compete with one another, either in efficiency or for territory. The adoption of the principle that utility companies shall have a monopoly in their respective territories is in effect to state that the managers of the utility companies are made agents of the state to secure the best possible rates and standards of service for their patrons. To couple this principle with the practice of never allowing competition is as absurd as to hold that employees under civil service should never be dismissed for any cause, however just.

The California ruling is that, if one utility occupies a field and another utility seeks to enter, the first utility will be protected in its monopoly only in case its service has been as adequate and its rates as reasonable as the new utility could give. That is, the certificate of convenience and necessity would be issued on the basis of the rates and service in effect on the date of the filing of the competing utility's offer; and endless time for repentance is not granted. Each utility company, therefore, is expected to put itself in such a position that its patrons are at all times adequately served at reasonable rates. The rule of the California commission will, in the long run, be much safer than the practice of the Wisconsin commission.

Competition in municipal ownership and operation is a potent power for reasonable rates and service which no municipality should suffer to be taken out of its hands. The weakening of municipal power for securing justice through provisions such as those in the public service company law of Pennsylvania, by which no municipality can build or operate a competing plant nor extend the lines or the number of private consumers of existing plants, save upon the permission of

a state commission, cannot but be iniquitous in its final results.

8. *A city must have the power enumerated to it by the state and specifically reserved to it in its franchises and contracts to take over for public ownership and operation any and all of its utility plants.*

The alternative of municipal ownership is needed for two reasons: In the first place, the final test as to the reasonableness in rates and service must be what a publicly owned and operated plant can provide those rates and services for. As the president of the California Commission has recently pointed out: "We should always have in mind two things: first, that under private ownership we must be so generous, and no more so, as is necessary to get our public utility work done and money invested in such enterprises; and, second, we must always have in mind the comparison between the conditions that would exist if public ownership were resorted to and those that confront us under private ownership, and if it be found that the amounts exacted under private ownership in payment for doing the business are excessive in comparison with the amounts that could be reasonably expected to be exacted under public ownership, then the latter will inevitably result." In the second place, the city's best interests necessitate a continuous control over its public utilities. While continuity of control can be maintained in part by some of the measures above set forth, such as access to books and properties, yet there will come a time in the history of most every public utility when continuity and adequacy of control can come only because the city has the alternative of municipal ownership and operation.

It must be clearly held in mind that the goal to be attained is rates based on cost and services adequate and safe. The American people are committed to attaining

these ends through the most effective means. If municipal ownership and operation prove to be that means, there will be no hesitancy in adopting such means simply because of "bogies" about socialism.

No proof of this is so definite as the rapid trend toward public ownership and operation. For instance, there has been a distinctive increase in the municipal ownership of electric plants from 1902 to 1912. The number of stations publicly owned and operated increased from 815 in 1902 to 1,562 in 1912, an increase of 91.7 per cent. The total income to such plants amounted in 1912 to \$23,218,989 as compared with \$6,965,105 in 1902, an increase of 233.4 per cent. The total expenses for 1912, including salaries and wages, amounted to \$16,917,165 as compared with \$5,245,987 in 1902, an increase of 222.5 per cent. The total number of persons employed was, in 1912, 7,940 as contrasted with 3,417 in 1902, an increase of 132.4 per cent. The output of stations in kilowatt hours was 537,526,730 in 1912 as compared with 195,904,439 in 1902, an increase of 174.4 per cent. The number of new municipal stations from 1907-12 was 301, the number of stations that changed from commercial to municipal, 106, the number that changed from municipal to commercial, 80, making an increase of 26 for municipal ownership. In the period from 1902-1912, while the total number of commercial and municipal central electric stations increased 0.9 per cent., the number of municipal stations increased 51.5 per cent., while the number of commercial stations actually decreased 7.7 per cent.

Municipally owned and operated plants will serve as laboratories by which cities can determine what the actual cost factors in furnishing the various public services are and ought to be. Municipal ownership and operation will be, after all is said, the determining factor in

fixing those rates and services. When stock can no longer be watered freely, when exorbitant profits can no longer be anticipated, subsidized magazines will no longer depict in such glowing terms the dire results that will accrue through municipal ownership and operation. Indeed, if, through the decisions of public service commissions and the courts, ample values can be written into existing plants we may expect within a very short time a landslide toward municipal ownership, and operation encouraged and financed by the big serving companies themselves.

The effect of the option of city ownership on city efficiency is, wherever adopted, most marked. At the worst, a city simply turns from known losses of mismanagement to prophesied losses of public management; and many of the latter ills fail of fruition.¹

¹The Municipal Lighting Committee of the City Club of Berkeley has published a bulletin on Municipal Lighting Plants in California which seems supported by facts gleaned from first-hand investigations. This report includes the following paragraphs:

"The condition of the physical plants is generally good, and may be roughly classified as seven good; four fair; four poor. A small increased expenditure each year would keep all these in good condition, and the profits are sufficient to permit this without raising rates. The chief difficulty is in the small towns, which cannot afford to employ competent foremen and linemen.

"The solution of this has been worked out successfully by the towns of Glendale and Burbank. The Superintendent of the Glendale Electric Department has built a complete distributing system in Burbank, and is now maintaining it under an agreement by which Burbank pays a part of his salary and the actual cost of labor and materials is furnished by the City of Glendale. This plan can be adopted by any two or more adjacent towns with good results and economy.

"Contrary to the opinion generally held respecting the management of municipal undertakings, the investigation developed the fact that the number of men employed in the lighting plants

We are now thoroughly committed to the regulation of municipal utilities.¹ Regulation has been accepted by the companies. The question of the future is as to whether or not regulation will in turn give way to public ownership and operation. It is now apparent that the permanency of regulation is endangered in two ways. In the first place, public service commissions tend to allow higher valuations than would be allowed by the courts. The reason is that public service commissions must attract as well as retain capital in their cities and states, while the duty of the courts is solely to prevent confiscation. If values are fixed at points beyond what the city could build its own plant for, the cities will tend toward public ownership and operation. In the second place, the laws creating public service commissions have, many

is too few rather than too many. This has been caused in some cases by the desire to make the department show a larger profit than is proper, and also to prevent criticism of the management by political opponents."

¹ The following states have commissions with full jurisdiction over public utilities:

<i>State</i>	<i>Title of Commission</i>
Arizona.....	Corporation Commission
California.....	Railroad Commission of the State of
Connecticut.....	Public Utilities Commission
District of Columbia....	Public Utilities Commission of the
Georgia.....	Railroad Commission of
Idaho.....	Public Utilities Commission
Illinois.....	Public Utilities Commission of
Indiana.....	Public Service Commission of
Maryland.....	Public Service Commission
Massachusetts.....	Board of Gas and Electric Light Commission
Michigan.....	Railroad Commission
Missouri.....	Public Service Commission
Montana.....	Railroad Commission of
Nevada.....	Public Service Commission (Electric Railways excluded)
New Hampshire.....	Public Service Commission
New Jersey.....	Board of Public Utility Commission for the State of
New York.....	Public Service Commissions, 1st and 2nd Districts
Ohio.....	Public Utilities Commission of
Oklahoma.....	Corporation Commission of
Oregon.....	Railroad Commission of
Pennsylvania.....	Public Service Commission of the Commonwealth of
Rhode Island.....	Public Utilities Commission
Vermont.....	Public Service Commission
Washington.....	The Public Service Commission of
West Virginia.....	Public Service Commission
Wisconsin.....	Railroad Commission of

of them, taken from the cities practically all control over their own utilities. It cannot be expected that the cities, especially the larger ones, will suffer all control over matters so vital to their welfare as their utilities to be taken out of their hands. The result of extreme centralization of regulative powers may be reaction against any regulation and toward public ownership.

The test of the durability of regulation must ultimately be its success in assuring adequate standards at rates based on actual costs. In any case the price of minimum utility costs and adequate service standards is eternal vigilance by the public spirited.

CHAPTER XIX

TAXATION AND GOVERNMENTAL EFFICIENCY

To many urban citizens the tax rate is the barometer for gauging living costs. To these, as the economic pressure rises, the tax rate must be lowered; as economic pressure is relieved, the tax rate becomes a matter of more or less indifference. The soundness of this traditional attitude is best tested by an analysis of urban expenditures.

For each \$100 in taxes paid by the residents of cities of over 30,000 population,¹ \$11.70 goes to the general government; \$11.80 to the police department; \$9.30 to the fire department; to all other protection to person and property, \$1.90; conservation of health, \$2.00; sanitation, \$8.20; highways, \$11.40; charities, hospitals and corrections, \$6.50; schools, \$28.90; libraries, \$1.30; recreation, \$3.70; miscellaneous, \$.40; general, \$2.90. The total receipts to cities of the above-named class, during the fiscal year 1912, were \$1,851,547,930.² In that

¹ Financial Statistics of Cities Having a Population of Over 30,000, 1912, p. 40.

² These receipts, classified by source, were as follows: general property tax, \$512,954,015; special property taxes, \$11,894,494; poll taxes, \$1,663,289; business taxes, \$52,106,810; non-business license taxes, \$3,991,825; special assessments, \$71,687,654; fines, forfeits and escheats, \$4,231,165; subventions and grants, \$34,315,501; donations, gifts and pension assessments, \$4,472,135; earnings of general departments, \$21,000,655; highway privileges, \$12,337,261; rents of investment properties, \$5,737,285; interest, \$24,257,087; earnings of public service enterprises, \$88,-

year the assessed valuation of the property in those cities was \$30,677,214,126.

In thirty-three Massachusetts cities, ranging in population from 14,073 to 606,216, the following expenditures were made for each \$100 of taxpayers' money: general administration, \$7.60; police department, \$10.11; fire department, \$8.81; other protection of life and property, \$1.80; public health and sanitation, \$9.01; highways and bridges, \$20.62; charities and corrections, \$6.10; education, \$28.06; libraries and reading-rooms, \$2.03; recreation, \$4.62; soldiers' benefit (estimated), \$.94.¹

If health conservation increases productivity, and therefore multiplies urban power; if the facts in the chapter on Vitality through Recreation do prove the need for recreational facilities and reveal ample returns on money invested therein; if the sanitary and social welfare of urban residents requires greater expenditures in raising the standards of housing conditions, as evidenced in the chapter on housing; if urban power can be increased through educational efficiency; if public service enterprises are necessary for the service needed by the city and for the assurance of minimum utility costs, then the tax rate, in so far as it reflects wise expenditures in these channels, means both lower costs now, and better earning power and better living costs under more wholesome conditions in the future.

The simple fact is that in densely populated areas many things can be done collectively more cheaply and expeditiously than they can be done individually. This simple fact accounts for the increase in city expendi-

414,264.—Financial Statistics of Cities Having a Population of Over 30,000, 1912, p. 18.

¹ "The Cost of Municipal Government in Massachusetts"—Public Document, No. 79, p. xlviii, published in 1908.

tures in the past; it will account for the rapid growth in collective expenditures in the future.

Laissez faire and its companion fear, dread of government, may be fitted to the exploitation of the forest and the prairie; they are not fitted to urban conditions which in their very nature make for the exploitation of men, women and children. Just as the complexities of urban life differ from the simplicities of frontier life, so most collective activities of cities and the expenditures therefor differ in kind and degree from the governmental activities and expenditures of frontier townships.

To be sure, mere size of expenditures is no guarantee of their social value. Huge sums spent on boulevards for some favored contractor while the only sewer in some sections of the city is the open street do not speak either for sanity or wisdom in public expenditures. This type of governmental mismanagement has been, and unhappily still is, prevalent in the public business. An efficiency study conducted in Chicago showed that the day laborers work 40 per cent. of their time, waste 46 per cent. of their time, the balance being spent in waiting and in other ways not counted for. The loss of 12 per cent. of the time of Chicago's street cleaners meant a loss of \$120,000 a year; a loss of 13.7 per cent. of the time of ash teams was equivalent to a loss of \$70,000 per year. Again, in Chicago, one assignment of coal weighing 232,000 pounds was paid for three times; while bridge houses were painted at costs ranging from five to seven times a reasonable amount. Paving repairs which should have cost \$11.88 cost \$2,997.91. Only 62 per cent. of gas-lamp mantles were in a passable condition and only 20.2 per cent. in good condition. A police pension fund of \$600,000 was drawing no interest, though the interest should have amounted to \$25,000

per year. Similar examples could be taken from the pages of many another city's history.

But the hopeful sign of the times is that just such useless expenditures are being exposed. Throughout the past decade there has been a widespread revival in applying efficiency principles to the public business.

Throughout the country certain principles have been tried and found ample for securing and assuring efficiency in administering the public business. No longer need it be said, and no longer can it be said, save with the exceptional city, that a dollar of public moneys buys but thirty or forty cents' worth in actual returns. A dollar of the public moneys, in the larger number of American cities, now buys as much as the money of individuals; and in many cases buys more than the moneys of large corporations.

If the city is to act and think effectively, it must have powers adequate to its needs. One of the first principles for governmental efficiency in cities, therefore, is home rule.

The rule as to the powers held by American cities in the past has been succinctly stated by Judge Dillon as follows: (1) those granted in express words; (2) those necessarily or fairly implied in or incident to the powers expressly granted; (3) those essential to the declared objects and purposes of the corporation—not simply convenient but indispensable.

The rule in the United States that cities have only such powers as it pleases the state legislatures specifically to delegate to them is but another way of stating that American cities must look for decisions, in regard to the most vital of their governmental matters, to their state legislatures. In no other country in the world is this rule followed. In no other country are the city's most important matters determined not in its city hall but in

its state capitol. Happily the people in nearly one-third of our states have set aside this American ruling by adopting "home rule" provisions in their constitutions.¹

The courts in all the "home rule" states have interpreted the constitutional amendments granting home rule as giving to the municipality full and complete powers over all local and municipal matters—all powers, indeed, that the state legislature could itself exercise in the field. The decisions of the Colorado supreme court are typical as to what the supreme courts of other states are deciding as to the powers of home rule cities.

Mr. Justice Steele, in speaking for the Colorado supreme court in one of its leading home rule cases, said: "The amendment is to be considered as a whole in view of its expressed purpose of securing to the people of Denver absolute freedom from legislative interference in matters of local concern." In a more recent case, the court interpreted the purpose of the home rule amendment to be "to grant home rule to Denver and the other municipalities of the state, and it was intended to enlarge the powers beyond those usually granted by the legislature. . . . It was intended to confer not only the powers specially mentioned, but to bestow upon the people of Denver *every power possessed by the legislature in the making of a charter for Denver.*" "The test," said Justice Steele, "is whether the powers, if exercised, will promote the general objects and purposes of the municipality . . . and unless it clearly appears that

¹The following states have provisions granting home rule to cities (1914): Arizona, California, Colorado, Michigan, Minnesota, Missouri, Nebraska, New York, Ohio, Oklahoma, Oregon, Texas, Virginia, and Washington. Maryland will vote upon home rule within the present year.

some constitutional provision has been infringed, the law must be upheld."

In the field of government, as in the animal and vegetable world, form must be adapted to function. It is the recognition of this basic principle that constitutes the second great force in the current vitalization of urban government. The twentieth century city inherited a form of government borrowed from that devised for the national government under social and economic conditions widely divergent from those now existing in American cities. This form of government, with its two branches of councils, its independently elected officers and its independent judiciary, was used as a cloak for partisan mismanagement and for countless forms of odious graft.

Cities demand administrative efficiency primarily. This means conspicuous responsibility for officials on the one hand and on the other hand a simple governmental structure responsive to sustained public demands. Slowly but surely a new form of government suited to these needs has been evolved, first, through centralization of power in the mayor's hands, then through the creation of smaller councils. The development of commission government and its adoption in 306 cities with a population of 7,381,987, and now the development of the city manager idea for smaller cities and mayoralty responsibility for all appointments in larger cities, are giving to American cities a form of government suited to their functions.

In the halcyon days of graft in American cities, the budget was fixed in "star chamber" sittings of the council; or, more probably still, the council was called upon to ratify blindly a budget drawn up in some back office where ward politicians met at the behest of those still higher in partisan power. And of course it was none

of the citizens' business what went on in these star chamber meetings! Was not the council chosen to act *for* the people?

But twentieth century urban democracy decrees quite otherwise. Standard budget forms are now devised which give under proper classifications and under unit costs the whole story of expenditures and receipts. Public officials are required to submit their budget estimates in ample time in advance of the official budget, supporting their request with comparative data whenever possible in such form as to admit of intelligent analysis. The kind, class, quantity and probable cost of supplies and materials must be estimated in detail. Supplies must be itemized; inventories set forth; expenditures for previous years set down, with explanations and reasons for any requests for increases therein. An independent detailed investigation, conducted by the mayor, the controller, the bureau of economy and efficiency, or some private bureau of municipal research, checks up the receipts and expenditures so itemized. Budget exhibits and displays then show comparisons between the amounts allotted to various items. The citizen is thus informed as to the relative amount going to flowers for boulevards and the amount going to nurses for sick children. Then follows publicity, and opportunities for full discussion by and before the council.

The want of uniformity in standards has been another cloak behind which have been hidden literally multitudes of municipal sins. Shall a granite street curb to be set in concrete be twelve or twenty-two inches in depth? If "the people" do not know, and if the councils do not know, and if there are no standards accepted through the country, the "contractor friend" will have no difficulty in getting what he wants. Through want of stand-

ardization, countless scores of miles of useless cement are lying in the ground in all our largest cities.

The testing laboratory is being used in New York City and other places to test materials and supplies to make sure that they come up to the standards specified. Specifications are no longer being drawn carelessly or in a way that will shut out all bidders save the favored one. Even stationery is being standardized so that no longer is the same department using numerous forms and sizes of stationery, blanks, etc., to the added burden of the taxpayer. Time records are being kept as to the work of city employees, not as a "humiliation," but in order to ascertain with accuracy the exact amount of time necessary to do a given piece of work, in order that accurate estimates may be made therefor. Accounting systems are being standardized so that complete control is kept over all appropriations and expenditures. Divisions of cost and statistics are collecting and tabulating the facts and data pertaining to the various activities of the city on a unit cost basis, so that the efficiency of one department can be compared with the efficiency of other departments in the same city or with similar departments in other cities.

The fourth factor in efficiency in administering the public business is, therefore, summarized in the word standardization. Bountiful, indeed, have been its fruits, despite its scant half dozen years of life in the light.

Most difficult of all problems of urban efficiency is to get an efficient personnel on the public staff. A comparative study of efficiency and municipal labor in New York City and Chicago was made by Benjamin F. Welton, engineer in charge of the Bureau of Efficiency in the office of the Commissioner of Accounts, New York City. Mr. Welton states that these municipalities "normally suffered a loss of efficiency in the forces examined

varying from 40 per cent. to 70 per cent. This, of course, represented virtually nothing except wasted time. While these investigations covered only a relatively small portion of the total labor employed in all departments of either city, it may be stated with the utmost assurance that the average efficiency of labor in any large municipality will not at the present time exceed 50 per cent. . . . The annual labor payroll of New York City approximates \$17,000,000. A loss in efficiency of 50 per cent. means, therefore, a yearly waste of \$8,500,000." ¹

This inefficiency in municipal labor Mr. Welton accounts for through: "(1) Inefficiency in the supply, distribution and use of material, plant and equipment. (2) Inefficiency due to lack of knowledge concerning work conditions and requirements. (3) Inefficiency due to lack of predetermination in the assignment of work. (4) Inefficiency due to improper organization of force. (5) Inefficiency due to improper methods and unsystematic procedure. (6) Inefficiency due to lack of discipline. (7) Inefficiency due to lack of standards by which performance may be judged. (8) Inefficiency due to inadequate and inaccurate records of performance and conduct." ²

A continuing cause of this municipal inefficiency is the all too prevalent use made of the contracting system for cleaning streets, collecting garbage, paving streets and similar urban work. The relations between contractors and city government have, as a rule, been unsavory. They give no promise of being any other way in the future. The solution is direct control and operation by the city.

¹ Benjamin F. Welton: "The Problem of Securing Efficiency in Municipal Labor."—*The Annals of the American Academy of Political and Social Science*, May, 1912, p. 104.

² *Ibid.*, p. 109.

Nor are the means and agencies wanting for securing efficiency in the personnel of the city's public staff. Scientific management has worked out the following four principles for securing efficiency in industrial plants: (1) "Science, not rule of thumb." (2) "Harmony, not discord." (3) "Coöperation, not individualism." (4) "Maximum output, not restricted output."¹ These four principles can be reshaped to fit municipal functions as follows: (1) There must be conspicuous responsibility; (2) organization of work must be on functional lines; (3) there must be scientific selection of workmen; and (4) there must be motive for continuous service on an efficiency basis.

Conspicuous responsibility is being secured through the commission plan, the city manager plan and the plan for centralizing administrative power in the mayor with small, elective unicameral councils, in larger cities. A very interesting illustration of this principle has been made recently by the Director of the Department of Public Works in the city of Philadelphia, who got out a "Guide to Complaints," informing the public definitely the person to whom to go with complaints. Organization along functional lines scarce needs illustration here. The centralization of work pertaining to the paymaster's office, the centralization of the various city activities in a bureau particularly suited to that function rather than scattering varied functions throughout each of the bureaus are all leading to a more efficient and expert public staff. Even the planning room, once the laughing-stock, now the hope of the manufacturer and of the man in big business, is finding a place in city halls. The commission government in Trenton has recently adopted a school of instruction for policemen in order that the

¹Taylor: "Principles of Scientific Management," p. 140.

police may be taught the city's ordinances and be made efficient in administering their inspection work.

The following general principles are fundamental in the selection and appointment of experts: (1) Such experts must have a sufficient equipment in mental stock and training to enable them to cope with their special problems without undue waste of time and the public moneys; (2) there is like need for experience and common-sense to give practicability to their plans, methods, and suggestions; (3) of special importance is a high sense of social and public responsibility; (4) to prevent inbreeding and to give comprehensiveness of vision, there must be a national supply of experts available to each and every kind of governmental service; (5) to get results, to prevent duplication, to secure economy in government, there must be unity and coöperation among all the officials of the city, the state or the nation; (6) the work, methods and results of experts and other government officials must be checked up with a view toward creating national standards in efficiency and competence.¹

There are many urgent reasons why there should be no residence limitations upon engineers, bureau chiefs and all those in expert service. One of these is that local opposition to "aliens" is based at times on the knowledge that the local expert is amenable to social and economic pressure that will tend to make him "safe and sane," in other words, often, dishonest. And if faith in the expert is to develop, all taint of dishonesty or amenability to "pressure" must be eliminated. A second equally poignant reason for no residence limitation on experts for governmental service is that the honesty, efficiency and competent standards of experts

¹ See *National Municipal Review*, April, 1914, p. 304, for a discussion by the author on "The Appointment and Selection of Government Experts."

will best be furthered by the creation of a national supply of such experts to the end that evidence of "taint" will reflect on the expert's standing among his associates. This is a factor of no small importance in developing a class of experts in whom the public can have a righteous faith.

The department chief must be clearly held responsible. Responsibility cannot be fixed if he cannot choose his own expert. "Soldiering" must be done away with. No competent governmental chief will tolerate such a situation as has existed in a certain city familiar to the author where all the work done in a bureau whose total appropriation for salaries was \$10,000 was done by a man receiving a salary of \$900. Essential to efficiency is co-ordination in all the governmental departments. For instance, the city's health, clean streets, an efficient market policy, all require responsive, well correlated work. To secure such work there must be an *esprit de corps* among officials, born only of unity and a desire to succeed. This can never be attained where the responsible individual does not have the power to appoint and to remove his subordinates.

And, finally, effective government hinges on an effective citizenry. An effective citizenry is an informed citizenry—informed through simple but adequate and inclusive reports by public officials and through the critical studies of bureaus of research, and public bureaus of economy and efficiency, a citizenry alert to community needs, and responsive to the advantages of community action, a citizenry that can see over the clasp of the pocketbook to an understanding and sympathy of others.

"The great problem is to make the government of a city human. . . . We may have efficient governments in our cities, and honest governments, as we are begin-

ning to have everywhere, and, happily, are more and more to have, but the great emancipations will not come through the formulæ of independents, socialists, or single-taxers, nor through law and order leagues, nor civic associations. Down in their hearts these are not what the people want. What they want is a life that is fuller, more beautiful, more splendid and, above all, more human. And nobody can prepare it and hand it over to them. They must get it themselves; it must come up through them and out of them, through long and toilsome processes of development; for such is democracy.”¹

Urban living costs are what we make them. To a large extent, they are the result of community inefficiency. Minimum living costs, particularly in densely populated centers, must mean social foresight and social efficiency and virility in public action, to the end that useless costs may be eliminated and sane, effective programs for social efficiency be carried into execution. The future, as to living costs, will depend largely upon the individual's initiative in increasing his own productive power, individual sanity in making standards and income meet, and individual perseverance and effectiveness in securing virile and wholesome community and social action.

¹ Whitlock: "Forty Years of It," pp. 204-5.

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